Edinburgh Natural History Society

JOURNAL 2019

record of activities in 2018

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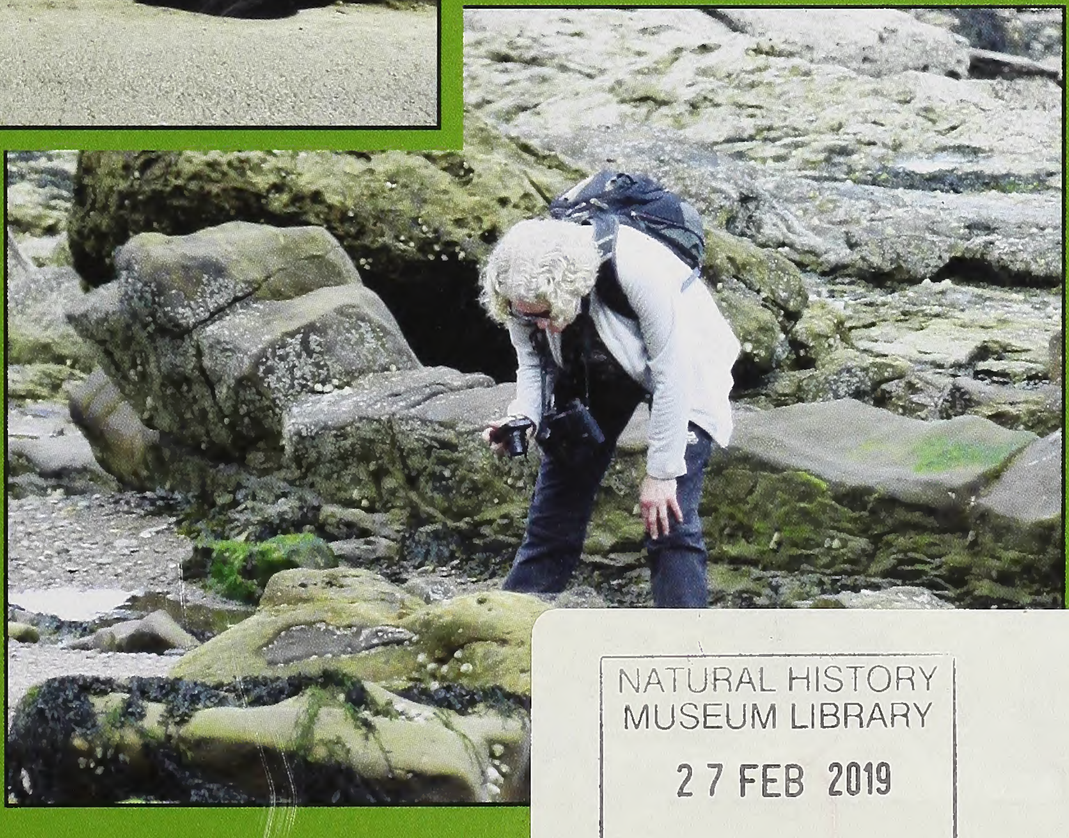

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Edinburgh Natural History Society

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Erica Bright, Patrick Chaney, Pauline King, Cameron die Konigin, Fiona Maguire

Non-Council roles within the Society

Excursion Committee	David Adamson, Lyn Blades, Steuart Ferguson, Wilma Harper, Jean Long
Indoor meeting organisers	Gillian Steele & Erica Bright
Website	Joanie McNaughton, Malcolm Lavery, Wilma Harper & Sarah Adamson
Facebook administration	Sarah Adamson, Wilma Harper, Pauline King
Twitter	Ptolemy McKinnon & Wilma Harper
Journal	Peter Leach
A.V. support for indoor meetings	Peter Leach
Library & equipment	Pauline King

The aim of the Journal is to create a snapshot of the Edinburgh Natural History Society in 2018. Outdoor meetings are held throughout the year and indoor meetings are held monthly at 7.30 on a Wednesday from September to April at the Guide Hall, 33 Melville Street, Edinburgh, EH3 7JF. Meetings are publicised by programme cards and on the website (edinburghnaturalhistorysociety.org.uk). All are welcome to the meetings.

Resources

Enquiries regarding requests for loans of equipment such as microscopes should be made via the website or Facebook page.

Thanks to members who made contributions and helped to produce Journal 2019, especially Vladimir Krivtsov, Jean Long, Fiona Mercer, Jackie Muscott and Sandra Stewart for proof-reading.

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Photographs from David Adamson, Sarah Adamson, Nev. Crowther, Steven Ewing, Steuart Ferguson, Pauline King, Peter Leach, Joanie McNaughton, Margaret Nisbet, Rob. Wallace.

Edinburgh Natural History Society
Scottish Charitable Incorporated Organisation Number SC 004669
Contact: enquiries@edinburghnaturalhistorysociety.org.uk

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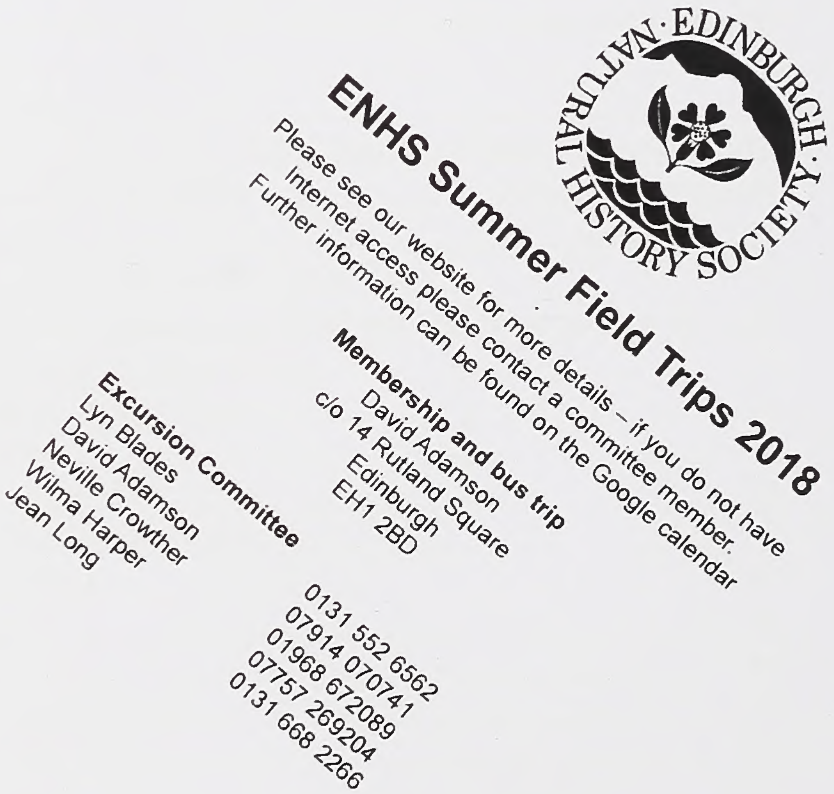
President’s piece 2019

It’s actually early January 2019 now and close enough to the New Year to be reflecting on the year past and looking forward to what 2019 may bring. The Edinburgh Natural History Society does this in part by producing this Journal chronicling its activities in the year past. Although we are not a big group, at around 100 members, we make up for that in the breadth of our activities and the depth of knowledge we both have and seek out. One of the commonest remarks I get when handing someone the card of our activities is surprise at just how much we do. Looking through this Journal, you will see once again we have been busy, we have discovered new places and new species and we have enjoyed each other’s company, and the odd scone, in the process.

None of this happens by itself. We rely on a small group of dedicated people who give their time to organise and deliver events, represent the ENHS and serve on its committees. I am grateful to those who have contributed in this way and when you read the articles it’s maybe worth reflecting that the field trips, evening talks and other activities, not forgetting this Journal, are the end product of the work of these volunteers. We need more people to come forward. If reading this inspires you to find out how you might help, you will be welcomed and given any support you may need. Not only that, it can be a lot of fun!

Wilma Harper

President



ENHS Summer Field Trips 2018

Please see our website for more details – if you do not have Internet access please contact a committee member.
Further information can be found on the Google calendar

Membership and bus trip
David Adamson
c/o 14 Rutland Square
Edinburgh
EH1 2BD

Excursion Committee

Lyn Blades	0131 552 6562
David Adamson	07914 070741
Neville Crowther	01968 672089
Wilma Harper	07757 269204
Jean Long	0131 668 2266

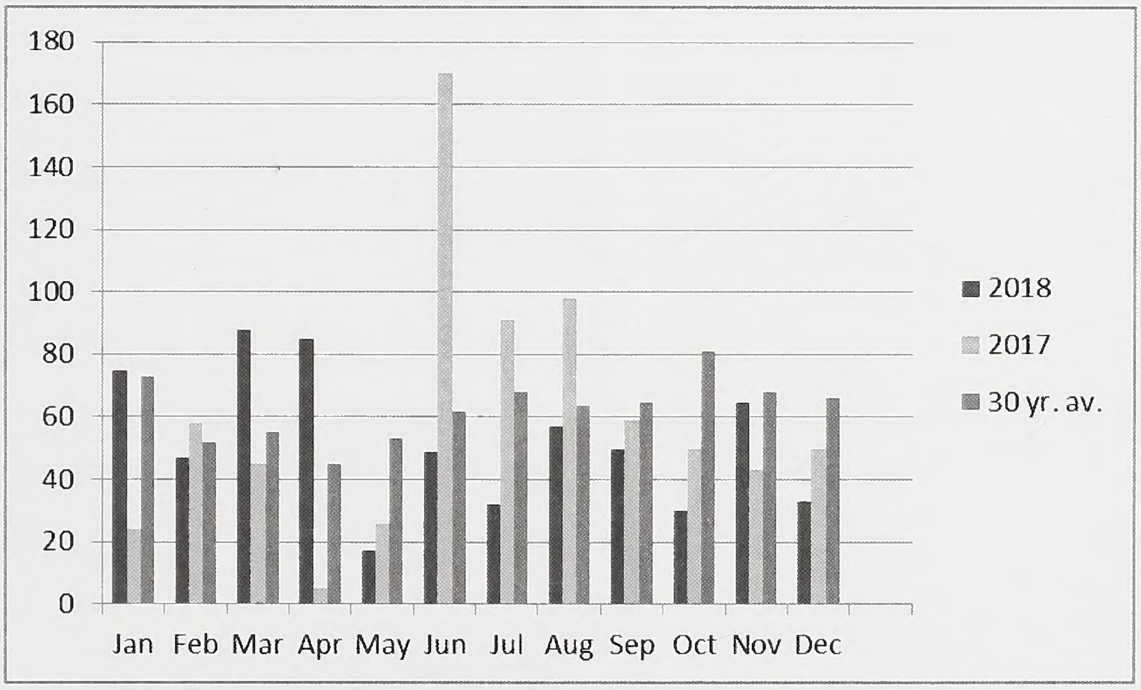
Rainfall in Corstorphine in 2018

I started taking daily rainfall readings as a schoolboy in Motherwell, and since I settled in Edinburgh over 60 years ago, daily readings have been maintained, with the help of neighbours during holiday periods.

However, I have decided to go over to taking monthly readings. The Meteorological Office have facilitated this by digging a deeper hole in the garden to accommodate their larger reservoir, accompanied by a larger measuring jar. Obviously, less detailed analysis is now possible. However, a wide range of weather detail is collected by Royal Botanical Gardens Edinburgh. My 2018 results are given below, together with 2017 totals and the 30 year average:

Monthly rainfall totals for 2018 & 2017, with 1981 to 2010 averages (mm)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2018	75	47	88	85	17	49	32	57	50	30	65	33	628
2017	24	58	45	05	26	170	91	98	59	50	43	50	719
1981-2010	73	52	55	45	53	62	68	64	65	81	68	66	752



As the above figures show, 2018 was a drier year than average. Particularly dry was May, with July, October and December having less than half the average. Only March and April had appreciably more rain than average.

The last time the year's total was less than 628 was in 2003 when 510mm was recorded. In comparison in 2012 rainfall measured 1121mm, getting on for double 2018's total.

Munro Dunn

Members' observations

Observations and wildlife records obtained during excursions are included in excursion reports, but below is a selection of records from Members, mostly from their own walks and explorations.

Month	Date	Observation	Observer
January	1st	Beautiful wolf moon, large and yellow, rising just above the horizon, was seen from M8 at Harthill	JMc
	3rd	2 sparrowhawks (*Accipiter nisus*) flew over garden (south Edinburgh)	JMc
	3rd	Male blackcap (*Sylvia atricapilla*) on my bird-feeder and on the ground under it about 3m. from my living-room window, most days until 6th April which was the last sighting	MC
	4th	Long-tailed tits (*Aegithalos caudatus*) on my bird-feeder	MC
	6th	2 nuthatches (*Sitta europaea*) in friend's garden at Winton Loan, Edinburgh	JMc
	7th	While walking in Dalkeith Country Park, saw jay (*Garrulus glandarius*), long-tailed tits (*Aegithalos caudatus*), treecreeper (*Certhia familiaris*), redwings (*Turdus iliacus*) and 4 goosanders (*Mergus merganser*) on South Esk	JL
	9th	Portobello Beach at Figgate Burn outflow - thousands of dead starfish, razor clams, cockles, mussels, tunicates and seaweeds washed ashore by Storm Eleanor	JMc
	9th	Redwing (*Turdus iliacus*) on Japanese maple in next-door garden	MC
	11th	1 nuthatch heard calling then seen at Bawsinch; white butterbur (*Petasites albus*) pushing through the frozen ground; listening to the sound of the ice cracking and pinging as a mute swan (*Cygnus olor*) slides inelegantly in search of open water	JMc
	12th	Kingfisher (*Alcedo atthis*) on River Tweed near Newtown St. Boswells	JL
	15th	4 blackcap (*Sylvia atricapilla*) on feeders in garden (south Edinburgh), 2 ♂ and 2 ♀	JMc
	16th	Watching carrion crows (*Corvus corone*) mobbing a buzzard (*Buteo buteo*) at Craigmillar Castle, as squalls of snow pile in from the North Sea	JMc
	21st	A pair of bullfinches (*Pyrrhula pyrrhula*) (M & F) on bird feeder every day for a week	MC
	26th	2-spot ladybirds (*Adalia 2-punctata*) hibernating on oak (*Quercus sp.*) tree in the Meadows, some black with orange spots, some vice versa	JMc
February	1st	At Glen Roy, a visit to see the Parallel Roads which stood out beautifully in deep snow; one male reed bunting (*Emberiza schoeniclus*) guddling in the snow for grass seeds	JMc
	2nd	Dog's mercury (*Mercurialis perennis*) in flower beside Ettrick Water west of Selkirk. Later that day watched a stoat (*Mustela erminea*) running along top of wall in Philiphaugh Estate	JL
	3rd	Black guillimots (*Cepphus grylle*) off Isle of Kerrera, one in summer plumage	JMc

	9th	Dipper (*Cinclus cinclus*), grey wagtail (*Motacilla cinerea*) and ♂ goosander (*Mergus merganser*) both showing well, on Figgate Burn. Also an unexpected chiffchaff (*Phylloscopus collybita*), which I was told had been there all winter	JMc
	13th	Brown hare (*Lepus europaeus*) in field near Haddington plus mixed flock of fieldfare (*Turdus pilaris*) and redwing (*Turdus iliacus*). Peewits (*Vanellus vanellus*) too - hope they haven't started to move inland already - in for a big shock!	JMc
	17th	Bawsinch - teal (*Anas crecca*), pair gadwall (*Anas strepera*) (always seem to see them in pairs no matter what time of year), little grebe (*Tachybaptus ruficollis*) pairing up, ♀ kingfisher (*Alcedo atthis*) and one ♂ pochard (*Aythya farina*). White butterbur (*Petasites albus*) is now in flower	JMc
	17th	Skylark (*Alauda arvensis*) singing above fields north of East Wemyss	JL
	26th	Song thrush (*Turdus philomelos*) singing from atop a nearby elm (*Ulmus sp.*), and the first I've heard of chaffinch (*Fringilla coelebs*) singing this year	JMc
	28th	Big snow day: 22 starling (*Sturnus vulgaris*), 11 blackbird (*Turdus merula*), 1 song thrush (*Turdus philomelos*) (wonder if it's the one I heard singing two days ago) and 2 blackcap (*Sylvia atricapilla*) (not forgetting 17 house sparrow (*Passer domesticus*), 4 tit species, robin (*Erithacus rubecula*) and dunnock (*Prunella modularis*) in the garden	JMc
	28th	Watched sparrowhawk (*Accipiter nisus*) eating small bird by Water of Leith at Colinton Dell	JL
March	2nd	Another thrush joins the feeding frenzy in the snow - a fieldfare (*Turdus pilaris*), also a garden first. Seen fieldfare with redwing in nearby trees during cold spells, but never in the garden. Must be the Cox's pippins!	JMc
	4th	Teal (*Anas crecca*) on Blackford Pond	JL
	7th	First tadpoles at Woodhall Dean	PL
	12th	Song thrush singing again and the chaffinch.	JMc
	12th	At Bavelaw - a bittern (*Botaurus stellaris*) (to add to the spasmodic winter records)	NC
	21st	First action at the Binning Wood toad crossing	PL
	21st	Red squirrel (*Sciurus vulgaris*) at Portmoak Moss. Colt's-foot (*Tussilago farfara*) in flower by Loch Leven. On bus journey back saw my first lambs	JL
April	1st	Finally caught up with the drake ring-necked duck (*Aythya collaris*), blown in from North America, which had been visiting Figgate, Blackford, Lochend Ponds and Duddingston Loch over a period of three weeks. I saw it at Blackford Pond, a very local twitch!	JMc
	1st	Chiffchaff and nuthatch both singing at Lauriston Castle	JMc
	12th	During brief visit to Cheshire, saw blackthorn (*Prunus spinosa*) and willow in full flower when barely a bud evident in northerly Lothian	PL

	13th	Visit to Baron's Haugh produced a pair of nest-building treecreeper (*Certhia familiaris*) and singing willow warbler (*Phylloscopus trochilus*), chiffchaff (*Phylloscopus collybita*) and song thrush (*Turdus philomelos*). Watched one pair of nuthatch on the ground in the leaf litter and another behaving romantically in the tree canopy	JMc
May	2nd	First garden snail of the year (*Cornu aspersum*) out from hibernation	JMc
	4th	Found the larva of large yellow underwing (*Noctua pronuba*) in the garden, sheltering under the bird bath saucer alongside a spider and half a dozen still-hibernating garden snails	JMc
	11th	At Bawsinch, herons (*Ardea cinerea*) sitting on nests. There's been a shift in the heronry, moved slightly west possibly because one of the islands, which had been sinking, has been clear-felled. Stunning chicken of the woods (*Laetiporus sulphureus*) on dead willow (*Salix sp.*) stump	JMc
	12th	Along the track from Longniddry to Seton Sands, a ribbon of scarlet - shining cranesbill leaves turned red by the hot weather	JM
	13th	First of this summer's swifts (*Apus apus*), screeching over the garden	JMc
	15th	Newhailes - saw Molly standing stock still gazing at a bush watching a wren (*Troglodytes troglodytes*) singing its head off, oblivious to passers-by	JM
	15th	The garden at Milton Bridge began to reflect the changing seasons: lots of colourful lesser redpolls (*Carduelis flammea*) on the feeders, the first blackcap (male) (*Sylvia atricapilla*) of the spring and three bramblings (*Fringilla montifringilla*), which might be the last until autumn!	NC
	23rd	Craigmillar Castle Woods – plantain-leaved leopard's bane (*Doronicum plantagineum*) and alexanders (*Smyrnium olusatrum*). Heard a stock dove (*Columba oenas*) near the castle	JL
June	1st	Nice sighting of otter (*Lutra lutra*) at Bawsinch SWT Reserve. Watched it fishing to and fro in front of west hide for half an hour	JMc
	7th	On evening excursion to Braid Burn Valley Park, saw one 2-spot ladybird (*Adalia 2-punctata*) and pocket plum galls (*Taphrina pruni*) on blackthorn	JL
	28th	Heronry at Bawsinch doing well - don't have exact number of breeding pairs of heron (*Ardea cinerea*) but circa 32. Also one solitary cormorant (*Phalacrocorax carbo*)	JMc
July	3rd	Lots of speckled wood (*Pararge aegeria*) along edge of Hedderwick Hill Plantation. Some cinnabar (*Tyria jacobaeae*) caterpillars on ragwort (*Senecio jacobaea*). Silver-Y moths (*Autographa gamma*) flying west of East Neuk Family Park and a painted lady (*Vanessa cardui*)	JL

	5th	Longniddry Bents - a common blue (*Polyommatus icarus*) butterfly, the only one seen there despite several visits. Also a ringlet (*Aphantopus hyperantus*) and speckled wood (*Pararge aegeria*) (both of which seem to have done well) and a great splash of blue – vipers bugloss (*Echium vulgare*) and meadow cranesbill (*Geranium pratense*) in full flower	JM
	22nd	Broad-leaved helleborine (*Epipactis helleborine*) near Falkirk Wheel	JL
	24th	On excursion to Selm Wood, we found a quite rare species of false click beetle (family *Eucnemidae)* (*Epiphanis cornutus*). Thanks to Rob Wallace for ID. No confirmation on iRecord (at 30.12.18)	JMc
	28th	Seacliff - checked up on the sea wormwood (*Artemisia maritima*) on rocks at the east end of the bay	MC, JM
August	6th	Baron's Haugh recce with Nev. - purple loosestrife (*Lythrum salicaria*) and artist's fungus (*Ganoderma applanatum*), two new species for me	JMc
	6th	Blackford Pond - new plants recorded - Pyrenean valerian (*Valeriana pyrenaica*) and wild parsnip (*Pastinaca sativa*)	JM
	9th	Tentsmuir - summoned by a friend to see thousands of grass of parnassus (*Parnassia palustris*) flowers growing by the dry dune slacks	JM
	11th	Enjoyed seeing so many shieldbugs at Prestongrange excursion, including parent (*Elasmucha grisea*), birch (*Elasmostethus interstinctus*) and gorse (*Piezodorus lituratus*); lots of painted lady (*Vanessa cardui*) and comma (*Polygonia c-album*) butterflies, now quite common in Central Scotland. Also the quite rare Adonis ladybird (*Hippodamia variegata*)	JMc
	29th	Dead badger (*Meles meles*) seen on M8 just before crossing Union Canal. Reported to TWIC	JMc
	31st	First time I've seen silver-Y (*Autographa gamma*) at the house and there were two visiting regularly – a garden tick	JMc
September	1st	At the southern tip of the Mull of Kintyre Sue and I found four unusual halophytes, sea cabbage (*Crambe maritima*), oyster plant (*Mertensia maritima*), rock samphire (C*rithmum maritimum*) and sea radish (*Raphanus raphanistrum sp. maritimus*) are all rarities that have clung on here for about 40 years	
	8th	Limekilns - watched small white (*Pieris rapae*) butterflies laying eggs on young Brassica plants	NC
	19th	Leighton Moss during Storm Ali - Lillian hide - over a hundred black-tailed godwit (*Limosa limosa*) sheltering from the gales, some still in breeding plumage. Also 3 great white egret (*Ardea alba*), and a marsh harrier (*Circus aeruginosus*) battling into the wind. Marsh tit (*Poecile palustris*) on the feeders at the Visitor Centre	JM

	21st	Leighton Moss from the Allen & Eric Morecambe Hides - I was present at the time of the rare bird alert grey phalarope (*Phalaropus fulicarius*). Great excitement all round and a mega twitch; a lifer for me!	JMc
	22nd	Duddingston Loch - greater duckweed (*Spirodela polyrhiza*) in shallows at the edge	JM
	29th	On Gartmorn excursion I found a spiked shield-bug (*Picromerus bidens*) eating an unidentified brown hairy caterpillar	JL
October	1st	8 or 10 house sparrows (*Passer domesticus*) sit in a nearby privet hedge and feed at or under my feeder several times a day. I haven't had house sparrows in the garden for many years	MC
	6th	The Butterfly Conservation conference, Battleby - at the lunch break, several moth traps were opened revealing a score or so of species. They included merveille de jour (*Dichonia aprilina*), as beautiful as it sounds, brick (*Agrochola circellaris*), no secret about its colour, and a little known red-line quaker (*Agrochola lota*)	NC
	10th	Sad to see the oak tree at the east hide at Bawsinch has been damaged by Storm Ali. Nowhere to hang the bird feeders to attract nuthatch (*Sitta europaea*) and great-spotted woodpecker (*Dendrocopos major*) for close-up views. Saw the kingfisher (*Alcedo atthis*) again though at the east hide	JMc
	13th	Attended West Lothian's citizen science Aspen Workshop run by Aspen Enterprises and Forth Rivers Trust, at the Whitburn Community Centre	JMc
	14th	Commenced the BTO Tawny Owl (*Strix aluco*) Calling Survey at my local home patch. Heard one calling	JMc
	15th	Delighted to report my long-nurtured garden ivy - flowers just opened in last 2 days - has provided a lovely nectaring spot for a comma (*Polygonia c-album*). Garden tick, well worth the wait - not to mention hosts of hoverflies, wasps and spiders	JMc
	18th	Nice to see a stunning rosemary leaf beetle (*Chrysolina americana*) in the garden	JMc
	19th & 20th	Visited Kinneil NR and Crawfield Rd/Kinneil Wood, my two squares for the citizen science aspen (Gaelic *Eadha*) survey, identifying whether native or planted. All the aspen in my squares were planted ie non-native	JMc
	20th	At Ratho - two uncommon plants recorded - narrow-leaved ragwort (*Senecio inaequidens*) in the car park and red (or hairy) nightshade (*Solanum villosum*) on a verge. Both are old wool aliens, the former described as spreading in S.E. England a few years ago, now apparently spreading in the Lothians	JM
	31st	First seen at home in April 2009 and not seen since until now, the twenty-plume moth (*Alucita hexadactyla*). English name is bit of a misnomer as each wing is separated into six 'plumes'. The scientific name is more accurate	JMc

November	4th	Pipistrelle bat, either *Pipistrellus pipistrellus* or *Pipistrellus pygmaeus* flying in daylight at Penicuik Estate	JMc
	9th	Goldfinches (*Carduelis carduelis*) doing exceptionally well in Edinburgh. Circa 12 seen in trees at Relugas Road	JMc
	12th	Saw barn owls (*Tyto alba*) at Leuchie and Balgone on Monday and Wednesday, and a tawny owl (*Strix aluco*) in barn owl box on Friday	PL
	16th	On a warm, sunny afternoon one red admiral (*Vanessa atalanta*) in Amisfield Walled Garden, Haddington	JL
	23rd	At Scone Palace, came across a dead pine marten (*Martes martes*). Sadly I didn't find any hawfinch (*Coccothraustes coccothraustes*). Nice to see jay (*Garrulus glandarius*), great spotted woodpecker (*Dendrocopos major*) and my first winter visitors - fieldfare (*Turdus pilaris*) and redwing (*Turdus iliacus*)	JMc
December	6th	Stopped at Tebay on M6. Great noise and activity in rookery in trees between car park and motorway, despite the traffic	PL
	19th	Circa 100 waxwings (*Bombycilla garrulus*) at Calder Road/Wester Hailes Road roundabout - great close-up views for around 20 minutes - good to have another irruption year	JMc
	27th	Tawny owl (*Strix aluco*) calling, only second I've heard at my local patch for the Tawny Owl Calling Survey	JMc
	28th	Saw a mink (*Mustela vison*) in a tree above the Esk at Musselburgh today when on a walk with Vlad and David	SA
	28th	15 gorse shieldbugs (*Piezodorus lituratus*) at Musselburgh Lagoons	SA
	29th	On a visit to Glasgow - pair of goosander (*Mergus merganser*) on Forth & Clyde Canal at Westerton plus 6 moorhen (*Gallinula chloropus*). All behaving as if it was spring! On M8 homeward journey, 2 buzzards (*Buteo buteo*) sitting on fence (I now see them there weekly) and a kestrel (*Falco tinnunculus*) ♀	JMc
	30th	No sign of my garden annual winter visiting blackcaps (*Sylvia atricapilla*), a month or so late. I wonder if their breeding has been affected by this summer's long drought period	JMc
	31st	At King's Buildings upright coral fungus (*Ramaria stricta*), new for me, found at two sites, under cedar and Scots pine. Also found under pine were collared earthstar (*Geastrum triplex*) and wood blewit (*Clitocybe nuda*)	JMc
	31st	Corvids in large numbers (perhaps 1000 or more) leaving roost at sunrise, with a backdrop of Bass Rock	PL

Observers SA Sarah Adamson; JL Jean Long; JM Jackie Muscott; JMc Joanie McNaughton; MC Mary Clarkson; NC Nev. Crowther; PL Peter Leach

Kidney vetch

Nature notes

Red roll-rim

On 30th August, eight fairly large fungi were found to be growing inside a very old tool shed. The shed is built of bricks and the fungi were coming through the back wall between the bricks. The only light in the shed comes through two small slit apertures. A large birch tree grows in a neighbouring garden about 20 feet away. Fresh caps continued to appear until the end of September.

The fungus had all the characteristics of a *Paxillus* – decurrent gills, which could be pushed easily from the stem and a cap with an in-rolled edge.

Anne Andrews and Mary Clarkson had just returned from a fungus week at Kindrogan and they came to see it. They agreed that it was a *Paxillus* and that it did not match either of the two in our field guides.

Fortunately, Mary remembered that there had been an article on *Paxillus* a year or two ago in Field Mycology. With the aid of a key in this article we were able to name ours *Paxillus cuprinus*. One helpful feature is a slight constriction in the profile of the spore.

Elizabeth Farquharson

Global Outdoor Classroom 2018 at Royal High (17th May)

The Royal High School has a splendid outdoor educational environment and this event used local environmental groups to help engage pupils with their surroundings. Gordon Rutter, with responsibility for outdoor education and a biologist, coordinated the day.

Stephan Helfer, who had recently retired as a mycologist at Royal Botanic Garden Edinburgh, brought along his basket and introduced some fungi. The curriculum does not include the study of fungi, nonetheless they are very important both environmentally and as a source of food. Stephan had a large collection of fungi, especially St. George's mushroom (*Calocybe gambosa)* which is a fine edible spring mushroom.

From the Edinburgh Natural History Society Sarah Adamson organised a couple of ladybird hunts. The pupils, initially nonplussed by being asked to use their phones, searched areas of the grounds for ladybirds. Their task was to photograph the ladybirds which could then be recorded online via iRecord. Four species were found - 2, 7, 10 and cream spot, including different varieties of the 2-spot ladybirds.

The weather was perfect and at one point a roe deer walked close by the working groups. Many of the pupils appeared happy in the outdoors and we hoped this would be a memorable day for them.

Sarah Adamson

The sex life of Ribwort Plantain

For such a familiar and unassuming plant, ribwort plantain (*Plantago lanceolate*) has many surprises for the inquiring botanist. It is much given to abnormalities. John Presland has written them up in detail in Abnormalities in Plants (2009). In particular the inflorescence may divide in all sorts of ways and leaves may appear among the flowers. When I was walking down the lane from my house and found the plant that is illustrated here, I thought it was just another abnormality and indeed it is, but it is more than that.

When I examined my plant, I found that the whiskered effect is due to the styles being much longer than usual and the stamens being much shorter, rendering the anthers inconspicuous. In a normal inflorescence the flowers open from the base and progress to the apex. The styles emerge first but are inconspicuous. What we see most readily in a plantain inflorescence is a fairly broad ring of 'open' flowers with the anthers conspicuous at the end of their stamens. The anthers shrivel when the pollen has been released leaving a brownish area composed mainly of the sepals.

I looked at the anthers of my plant and found that they appeared to be empty of ripe pollen. This led me to search the web where I found an article on male-sterile ribwort plantains by Van Damme and Van Delden (1982). I read to my surprise that ribwort plantain has three forms. The majority bear normal hermaphrodite flowers with both stamens and styles, but there are also two other forms. One of these is outwardly hermaphrodite but the stamens do not elongate and the pollen is abortive, like my specimen, so it is male-sterile. The other is truly female - there are styles but no stamens. I was intrigued, and determined to find the three forms. This did not take me long once I knew what I was looking for! If all this is unfamiliar to you, it makes a nice mini-project.

Michael Braithwaite

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Birds and the 'Beast'

The winter of 2017-18 was a strange one – cold, with intermittent snow from late December to early April, culminating in the 'Beast from the East' in March.

Most winters I put feeders out on the back green and attract assorted tits and greenfinches. Last winter it got more interesting; in mid-January redwings (*Turdus iliacus*) joined the resident blackbirds (*Turdus merula)* poking about among fallen leaves, and a mistle thrush (*Turdus viscivorus*) joined them at least once. By the end of the month I realised that some of the 'greenfinches' were siskins (*Carduelis spinus*) which I have only seen in the garden once before. Then a lone goldfinch (*Carduelis carduelis*) (which seemed to be ravenous) appeared with the greenfinches, and birds like chaffinches (*Fringilla coelebs*) and the local robin (*Erithacus rubecula*), which usually prefer to feed on the ground, were also managing the feeders. After the coming of the 'Beast', starlings (*Sturnus vulgaris*), jackdaws (*Corvus monedula*) and even the resident magpies (*Pica pica*) had a go too, causing chaos for several days. Only the wood pigeon (*Columba palumbus*) remained grounded, mopping up whatever was spilt.

By early April the siskins had departed, but the greenfinches and the lone goldfinch were still coming, and on April 11 a great spotted woodpecker (*Dendrocopos major*) stopped by to sample the sunflower seeds and then move on to the peanuts. Shortly afterwards I was delighted to see two goldfinches feeding with the greenfinches, and to hear a wren (*Troglodytes troglodytes*) singing loudly. By the end of the month spring had finally arrived and the finches had all left to breed.

A bit late - aren't they supposed to get together on St Valentine's Day?

Jackie Muscott

MOOCs and Mark-Making

I have always enjoyed taking and sharing photographs from Nats outings but have recently decided to take advantage of a free training opportunity when I read how studying Natural History Illustration and drawing could improve my observation skills. The course description started:- "Do you find the natural world a source of inspiration? Do you observe it, care for it, photograph, draw or paint it? Whether an aspiring scientific or medical illustrator or someone who enjoys drawing nature's wonders, this first-of-its-kind course from 'Massive Open On-line Courses' is for you. Understanding the course will help you hone your skills in both art and observation.
The field of Natural History Illustration is about observing and illustrating subjects from nature, science and culture, with their linkages to the environment. Being able to observe and replicate our natural world through illustration provides insights into life that can change how we think about ourselves and our surroundings".

I hope to learn essential skills and techniques that form the base for creating accurate replications of subjects from the natural world. The learning objectives include developing:-

- an understanding of the application of fieldwork data to natural history illustration
- observational and visual analytical skills
- field sketching and recording techniques
- an understanding of the fundamental structure of animals and plants

I am using the EdX app. on my phone to keep in touch with developments on the course while out and about and would recommend this app. to anyone looking to explore what other MOOCs are available. (The course work requires Google Chrome and a bigger screen!)

This NHI101 course is delivered by the University of Newcastle, Australia. I will be studying with 16000 students enrolled for it from all round the World. This should lead to seeing some amazing creatures chosen as studies for artists from different continents. I expect it will also mean I will be taking even more time while out on our excursions to photograph, observe and collect specimens.

Pauline King

The harlequin model

From the single larva and adult in October 2017, harlequin ladybirds (*Harmonia axyridis*) have been counted in tens late in 2018. These were sighted in West Edinburgh at sites that have been regularly observed for a number of years.

The Asian harlequin ladybird was employed in the USA as a biological control for crop pests and inevitably started to expand its range across the globe. Michael Majerus of the Ladybird Survey had led a successful citizen science project to record UK ladybirds and in 2003 the model to record the new arrival was well established. By 2018 Edinburgh seemed to be at the leading edge of the Harlequin Invasion and is now tracked by Helen Roy, Centre for Ecology and Hydrology, and others.

The harlequin ladybird has provided a unique opportunity to anticipate and observe the dispersal of a new resident. The recording methods have evolved along with the development of computing. Furthermore, the data collected is accessible by all - open source. It's still important that the sightings are recorded. The information will inform us about the relationships between our native ladybirds and others organisms.

Some people are tempted to kill these new ladybirds but this must be discouraged for several reasons, one of which is the mis-identification and killing of our possibly less numerous native species. Harlequin ladybirds are very variable like some of our small ladybirds, such as the 10-spot (*Adalia decempunctata*). However, harlequins are large ladybirds and similar in size to some of our other natives.

Insects generally are poorly recorded in Scotland and anyone can make a difference. Ladybirds are a small group of beetles familiar to you and me. The easiest way to record them is to install the iRecord App. on your phone. Simply take a photo of your target and use the App. to submit your sighting. On any Nats field trip someone can help you with using iRecord. On field trips this year we have found small and unusual ladybirds, such as Adonis (*Hippodamia variegata*), 11-spot (*Coccinella 11-punctata*) and kidney spot (*Chilocorus renipustulatus*).

Back to the harlequin - whatever we feel about the relocation of non-native species the motivation was as a pest control to help secure our food crops and reduce the use of chemical pesticides. Harlequin ladybirds can eat vast numbers of aphids.

In late 2018 a new ladybird field guide was published by Bloomsbury and is a well-presented small book – "Field Guide to the Ladybirds of Great Britain and Ireland" by Helen Roy and Peter Brown, illustrated by Richard Lewington.

Sarah Adamson

Fungus abundance

I had the good fortune to be included in a week at the end of August at Kindrogan Field Centre organised by Alan Outen, who tutored the Fungus Course there for a number of years. We visited the usual classic sites – Black Wood of Rannoch, Birks of Aberfeldy, Killiecrankie, Morrone Birchwood, Inverey Woods, Linn of Dee and Falls of Bruar. Fungi were in all of these in great profusion – so many, in fact, that you could scarcely put your foot down without treading on them. Only once before have I seen such abundance and this was on the first time I attended the Kindrogan Fungus Course in 1991.

Mary Clarkson

Life on the edge

People often talk about habitat destruction. What do they mean? What does it mean to you?
As Nats we often explore habitat edges and their wealth of life. Natural edges can be the shore, the line between turf and rock on a hill, a woodland glade and riversides. I'm sure you can build-up a picture in your mind's eye - they are generally a joy to explore. Often the edges are man-made, offering precarious niche opportunities for incomers. These edges include the roadside, the boundary of crop fields and canal-side.

This was evident when undertaking a recce along the Eddleston Water with Wilma Harper. It had been straightened for the convenience of building the Borders Railway but because of the fear of flooding down-stream, the Water had been re-meandered. It will be interesting to see how well man has replicated the action of nature. On that day there were healthy streamers of flowering water crowfoot (*Ranunculus agg*) and a sandpiper (*Actitis hypoleucos*) fiercely defending its unseen family on the waterside shingle.

When visiting Burnmouth with Butterfly Conservation, Iain Cowe expressed a concern for these edges. A farmer had neatly applied herbicide to the edge of a cereal crop and a swathe out to the field boundary. We wondered whether the loss of the crop edge to herbicide would be similar to that occurring naturally with increased numbers of species, weeds to the farmer. What were the costs to the farmer in time, chemicals and equipment? Perhaps it appealed to the farmer's sense of tidiness and for us the blank soil made a good background for spotting butterflies and other insects.

Later on that day, steps had been made to access a lower terrace below the cliff top. Kidney vetch (*Anthyllis vulneraria*), the sole food-plant of the small blue butterfly (*Cupido minimus*) was growing in tufts at the step edges. Iain showed me the miniscule butterfly eggs within a kidney vetch head. Each head would sustain the growing larvae at a critical level of about 4 or 5 individuals. Even here, at a site worshipped for supporting the small blue butterflies, there is conflict. Nature versus tidiness! Would the larvae complete their life cycle before the step edges were neatly strimmed?

I like insects and my knowledge increases each year from appreciating their activities, simply by looking at flower heads beside a footpath. Some adult insects are pretty and well-known; however, their junior stages are often less pretty and have unsavoury habits. I'm not certain that everyone realises that there is a link between caterpillars and butterflies; I am certain that most people do not realise that other insects have a 'caterpillar' stage. If you are curious, pick a single species and explore its world. By observing just one species and reporting what is seen can make a difference to our understanding. You need no special qualifications, just curiosity.

Sarah Adamson

Self-pollinating Flowers

Soon after we set out on the ENHS excursion to Limekilns in May we encountered some plants of henbit (*Lamium amplexicaule*) which all had very tiny flowers. Henbit can have much larger 'normal' flowers but is prone to producing these little ones which self-fertilise in the bud – a process known as cleistogamy. Most plants go to some trouble to avoid self-pollination, but some produce cleistogamous flowers late in the season, so you may find common dog violet (*Viola riviniana*) or wood sorrel (*Oxalis acetocella*) with both a full seed capsule and a tiny cleistogamous flower.

Viola riviniana

A plant which has normal-sized flowers which rarely open properly is the round-leaved sundew (*Drosera rotundifolia*) which grows in wet boggy conditions. I wanted to photograph a plant in flower and searched for several years constantly frustrated, to find either buds or seeds (or both) before I was successful after a rather dry summer. Presumably the plant is well adapted to normal conditions, but opens itself to a bit of cross pollination (and genetic variation) if things seem to be changing.

cocksfoot proliferating

Later on the 5th May I found a plant of cocksfoot (*Dactylis glomerata*) which was proliferating, producing young plants on the flowerhead rather than seeds. It makes the flowerhead look shaggy and is a form of vegetative reproduction. All grasses can do it, usually late in the year or if times get tough. Several mountain grasses are prone to it and one, viviparous fescue (*Festuca vivipara*), does it all the time.

Jackie Muscott

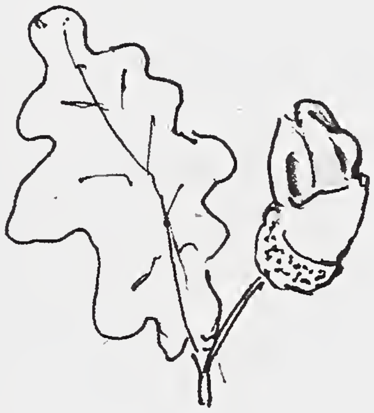
Lamium amplexicaule

Knopper Galls

There is much in the news at the moment about the spread of various serious tree diseases affecting elm (*Ulmus sp.*), larch (*Larix sp.*) and ash (*Fraxinus excelsior*) to name a few. Little is said about the gall wasp (*Andricus quercuscallis*) which affects our native oaks (*Quercus robur, Q petrea* and the hybrid) causing ugly excrescences on the acorns. Oaks have many galls which do little harm to the tree, and the knopper galls are certainly not lethal, but they do affect the tree's ability to reproduce - and this year I have seen trees with a good crop of acorns, nearly all of them galled.

The wasp was unknown in Britain until early in the 20th century and the story of its spread from the Continent is a familiar one. It was recorded in Jersey in1902, and by 1963 was established in the south. By 1983 it was approaching the Scottish border and now it's common in the Lothians and probably further north.

Jackie Muscott



knopper gall on acorn

Excursion reports

Falkirk Wheel to Rough Castle NS 853 801
27th January 2018, Leader: Wilma Harper

For the first Nats outing for 2018 the number one question was: would the weather tickle our enthusiasm? January had already given us the most beautiful winter-Saturdays anyone could ask for, but now fierce winds were forecast. 15 people voted with optimism and were rewarded with a spring-like temperature, albeit with a stiff breeze.

The location and route were well-chosen, being full of variety and interest. We explored an area within three of the most impressive civil engineering projects in Scotland – the Antonine Wall (built by the emperor Antonius), the Forth and Clyde Canal and the Falkirk Wheel, with power lines and railway tracks too…

We started at the lower carpark at the Falkirk Wheel, crossed the Forth and Clyde Canal to follow it along the north bank to Bonnybridge, and then through the Radical Pend under the canal, and along to the Loch Park and Elf Hill. We then turned east along the Antonine Wall to Rough Castle, just by Rowantree Burn. Here the group split with the lunchers taking more time before returning to the carpark.

Anyone merely interested in rarities should read no further because the delight of the day was the abundance of common sights…

We were all parked beside alders *(Alnus glutinosa)* dripping with catkins, and one common field speedwell *(Veronica persica),* was speedily identified. Then immediately at the canal, we were greeted by three mute swans *(Cygnus olor)* (two adults and a teenager), and a great spotted woodpecker *(Dendrocopos major)* flitted by. The next moment four roe deer *(Capreolus capreolus)* eyed us from the opposite bank, half hidden in the mostly birch woods. Other birds on this stretch included goosander *(Mergus merganser),* bluetits *(Cyanistes caeruleus),* a wren *(Troglodytes troglodytes*), house sparrows *(Passer domesticus)*, starlings *(Sturnus vulgaris)*, black-headed gulls *(Chroicocephalus ridibundus)*, 24 + mostly male mallards *(Anas platyrhynchos)*, and the inevitable wood pigeons *(Columba palumbus)*, carrion crows *(Corvus corone)* and magpies *(Pica pica)*. Cover at the canal edges was mostly rushes, including reedmace, *(Typha latifolia).*

The southside towpath was generally above the level of the surrounding ground and the fields below looked saturated, but the snow had melted, whereas parts of the canal still had large sheets of half sunken ice. The trees lining the towpath varied, including mature sycamore *(Acer pseudoplatanus)*, beech *(Fagus sylvatica)* and ash *(Fraxinus excelsior)*, and young ash saplings. Hazels *(Corylus avellana)* with catkins alternated with clumps of Japanese rose *(Rosa rugosa)*, in some places with young leaves. Otherwise there were a lot of dry dead heads – umbels and hawkweeds. Reaching houses by the towpath at Bonnybridge, there was a change to typical 'park' planting, with bamboo, variegated holly *(Ilex sp.)*, *gaultheria shallon*, cherry laurel *(Prunus laurocerasus)*, privet *(Ligustrum sp.)*, etc, and a small memorial with a cheering group of snowdrops *(Galanthus nivalis).* Along the way a couple of probably ex-Christmas spruce trees were taking their places, with a vigorous wink.

The opposite bank was edged by mature trees, and in some places by scrub. There was a fine row of beeches with their own leaf litter providing colour at the otherwise winter muted ground level.

At Bonnybridge we took the Radical Pend under the canal. This tunnel was constructed in the 1780s, and is beautifully paved. The Falkirk Cattle Sales (Trysts) were held at Rough Castle following enclosure of common ground at the previous location. This narrow tunnel was the access under the canal for large numbers of cattle. It was obviously a bottleneck, and when we went through there was a foot of water flowing, so it is little wonder that by the late 1860s the cattle trysts were relocated. We had the modern advantage of a raised path through, so no wet feet for us. The pend name 'Radical' is a reference to the stand nearby, led by Andew Hardie, against the Hussars in 1820, known as the Battle of Bonnymuir.

The next part of the walk passed through an area between the two main railway lines, and was previously used for heavy industries, including ironworks, chemical manufacture, fire brick manufacture and whisky distilling, and an explosives workshop - all now finished. We headed up to an area of restored ground, at Loch Park with Elf Hill, a former slag heap. In the neighbouring grass field there was a flock of around 60 greylag geese *(Anser anser)*, and on the loch – a dozen mallards, at least two coot *(Fulica atra)*, a group of goosanders, several tufted duck *(Aythya fuligula)*, and five teal *(Anas crecca)* flew over.

Elf Hill rose about 50 feet above the grass and gorse *(Ulex europaeus)* (some in flower), with a covering of mostly short heather *(Calluna vulgaris)*, a few plants of blaeberry *(Vaccinium myrtillus)*, tormentil *(Potentilla erecta)* and heath bedstraw *(Galium saxatile)*. There were also mosses with *Rhytidiadelphus squarrosus* the most obvious, and one common puffball *(Lycoperdon perlatum)*, a "mighty" one centimetre specimen, and a clump of *Cladonia* lichen.

We retraced our steps out of Loch Park to the track adjacent to the Antonine Wall and crossed it to walk along the wall to Rough Castle. Here the height of the wall is impressive with the deep ditch to the north and it is all smoothly grassed. On the top of the wall there were some single oak *(Quercus sp.)* and sycamore (*Acer pseudoplatanus)* trees, and after the heavy rain there were some deep muddy pond-puddles, with what was thought to be ivy-leaved crowfoot *(Ranuculus hederaceus)*. Below the wall there was a high fence, separating the railway track, with a contrast of thick birch scrub, and some large bracket fungi.

The outlines of the parts of Rough Castle were clear to see in the short grass, as we approached from the west. Then it was lunchtime, and we following the wall back down to the carpark. We were sorry that Mary Hayward was unable to join us as leader, particularly as she had fallen during her recce for this walk.

Fiona Maguire

Ladybank by train NO 306 096

24th February 2017, Leader: Wilma Harper

Twelve members met at Ladybank Station, most arriving by train, with a few by car. After a short walk through the village and over a level crossing we started at South Annsmuir, one of the compartments of woods, muirs and ponds that make up Ladybank Woods. Wilma's introduction described the topography as fluvial/glacial stones rounded by glacial action, with a sandy soil. Trees that were planted some 60 years ago as commercial timber (Scots and Corsican pine) gave rise to layers of organic matter being laid down over the glacial till.

We set off through predominantly Scots pine *(Pinus sylvestris)* where red squirrels (*Sciurus vulgaris*) occur but we saw none. A skein of pink-footed geese *(Anser brachyrhynchus)* flew over, 'pink-pinking' as they went. The first fungus of many was purplepore bracket *(Trichaptum abietinum)*, a saprophytic fungus, found on dead conifer wood. We came across two liverworts, *Lophocolea semiteres* some with notched leaves, and ciliated fringewort *(Ptilidium ciliare)* which has toothed leaves and is hairy underneath. Here too was broad-buckler fern (*Dryopteris dilatata*) just pushing through the pine needle carpet and we heard a great-spotted woodpecker *(Dendrocopos major)* drumming, signs of spring on the way. An interesting find was white-legged snake millipede (aka Black Millipede) *(Tachypodoiulus niger)*, recognised by its black body and white legs. We found it on rotting wood lying amongst fly larvae and slug or snail eggs.

By this time, we had moved into beech *(Fagus sylvatica)* wood and straight away we found beech woodwart *(Hypoxylon fragiforme)*, a fungus which looks like small warty brown growths, the fruiting bodies of which are bright salmon pink at first. We found a scat and discussed if it might be badger *(Meles meles)*. However, on research it looks more like red fox *(Vulpes vulpes)*: tapered, containing fur, and grey with age. A nice example of a male wolf spider was found here too. Roe deer *(Capreolus capreolus)* were in evidence; we found pellets among the pine needle-carpeted forest floor.

David and Vladimir found a *cladonia* growing on open path along the edge of more pine forest. It had purple-brown tips and they agreed it was likely *Cladonia ciliata.* Also here they examined a frequent liverwort, tumid notchwort *(Lefrozia ventricita)*, characteristically opaque, bright green, and quite different from other British liverworts. It has prominent clusters of green gemmae on the tips of its bilobed leaves.

We came upon a defensive pill-box dating back to WW2, which had been well-used by nesting swallows *(Hirundo rustica)* in the summer. At Triangle Wood we watched a goldcrest *(Regulus regulus)* in the tree canopy feeding on insects found on cones and needles. We arrived at a more open area, bordered by deciduous woodland where we saw green elfcup *(Chlorociboria aeruginascens)*, on distinctive green-stained dead birch *(Betula sp.)*. The green fruiting bodies of this fungus are rarely seen. We arrived at an open pond, iced over, with reedmace *(Typha latifolia)* growing on its edges and a dead common frog *(Rana temporaria)* lying nearby, likely frozen to death.

The circular route took us back into a dense mixed coniferous/ deciduous wood, Edens Muir on the one side and Heatherhall Wood on the other. On a minor road by now, the last stretch took us past open furrowed fields with rich brown soil, this being a predominantly arable farming area in Central Fife.

Joanie McNaughton

Kilspindie circuit NT 457 794
24th March 2018, Leader: Steuart Ferguson

On a bright morning our group gathered at the Gosford Estate gate for a circular walk around Kilspindie. The route was anti-clockwise, starting with the roadside shelter belt then towards the Craigielaw Golf Club and through Harestanes Woods to the shore at Green Craig. We then crossed to the small inter-tidal Green Craig Island and followed the coast east via Craigielaw and Aberlady Points, past the Kilspindie Golf Club, around the bay to the church and back via the shelter belt to the cars. We were lucky to have a sunny day, a break between the storms. The previous weekend I had to curtail the recce at Craigielaw because of the very strong easterly wind.

The shelter belt was very quiet but a brown hare (*Lepus europaeus)* was seen sitting among the balls on the golf practice ground. In Harestanes Wood we found snails hibernating in cracks in the bark, some primroses (*Primula vulgaris)* and several groups of orange ladybirds (*Halyzia 16-guttata)*. The largest group contained 34, about half the number which had been in the same spot in November. A nuthatch (*Sitta europaea)* was seen prospecting nest sites. David found 2 new mosses, *Fissidens viridulus* and *Bryum rubens* and a badger (*Meles meles*) sett was also found. We had lunch on arrival at the coast then continued via the island and shore.

The earlier storms had left a large number of casualties on the beach - razor clams (*Ensis magnus)*, scallops (*Pectinidae),* common whelk (*Buccinum undatum)*, sea squirts (*Tunicata)*, sea urchins (*Echinoidea)*, brittle stars (O*phiuroidea)*, necklace shell (*Euspira catena),* some unidentified shrimps and a large group of bi-valve molluscs, genus *Tellina,* some of which were still alive and squirting but from the strong smell many were already dead. A blunt gaper (*Mya truncata)* was found alive and moved to a rockpool, so giving it a chance of survival. Among the rocks at the point were a dead guillemot (*Uria aalge*) and puffin (*Fratercula arctica*). The puffin had its summer bill and visible in it were the small tooth-like serrations which allow them to hold on to their prey. The rocks around Craigielaw Point contain various fossils; crinoids, siphonodendrons, colonial rugose corals and brachiopods.

The rest of the walk along the shore brought us to Aberlady Bay, where birds are the main feature. The bay seldom disappoints and the day list follows:
red-throated diver (*Gavia stellata),* cormorant (*Phalacrocorax carbo)*, mute swan (*Cygnus olor),* shelduck (*Tadorna tadorna)*, wigeon (*Anas penelope)*, mallard (*Anas platyrhynchos),* eider (*Somateria mollissima),* long-tailed duck (*Clangula hyemalis)*, common scoter (*Mellanitta nigra)*, velvet scoter (*Mellanitta fusca),* red-breasted merganser (*Mergus serrator),* oystercatcher (*Haematopus ostralegus)*, golden plover (*Pluvialis apricaria),* lapwing (*Vanellus vanellus)*, knot (*Calidris canutus),* dunlin (*Calidris alpina)*, bar-tailed godwit (*Limosa lapponica),* curlew *(Numenius arquata),* redshank *(Tringa tetanus),* turnstone *(Arenaria interpres*), black-headed gull (*Croicocephalus ribibundus)*, common gull (*Larus canus*), herring gull (*Larus argenatus),* guillemot (*Uria aalge)*, puffin (dead) (*Fratercula arctica)*, wood pigeon (*Columba palumbus),* skylark (*Alauda arvensis)*, pied wagtail (*Motacilla alba yarrellii),* robin (*Erithacus rubecula),* blackbird (*Turdus merula)*, mistle thrush (*Turdus viscivorous),* coal tit (*Periparus ater)*, blue tit (*Cyanistes caeruleus),* great tit (*Parus major)*, nuthatch (*Sitta europaena)*, magpie (*Pica pica),* jackdaw (*Corvus monedula)*, carrion crow (*Corvus corone),* starling (*Sturnus vulgaris),* house sparrow (*Passer domesticus)* and goldfinch (*Carduelis carduelis).*

Steuart Ferguson

RSPB Loch Leven NT 160 990
7th April 2018, Leaders: Committee

Three days after winter's blizzards had abated, seven of us met at this well-known location for a very pleasant stroll in mild weather around the south-east section of the Loch Leven Heritage Trail. Winter may have ended, but spring had not properly started. Only gorse *(Ulex europaeus)* and colt's-foot *(Tussilago farfara)* were obviously in flower, and the insects that depend upon willow for their first meal had not yet emerged from their long hibernation. Thankfully there was an abundance of birdlife, from the siskins *(Carduelis spinus)*, tree sparrows *(Passer montanus)* and green woodpeckers *(Picus viridis)* around Vane Farm to the shoveller *(Anas clypeata)*, pochard *(Aythya farina)* and gadwall *(Anas strepera)* ducks on the water. We saw or heard around 40 bird species: from fieldfares *(Turdus pilaris)* that stood motionless and silent to the vocal and busy chiffchaffs *(Phylloscopus collybita)*.

Molly focussed her attention on the birds and was rewarded with views of a kingfisher *(Alcedo atthis)* which the rest of us missed. I explored some open woodland east of the main path, where wolf spiders scrambled through the dead leaves of last year's grasses and a couple of jays *(Garrulus glandarius)* noisily objected to my presence. The rest of the group lunched at a popular pathside spot, vacating it to a Kilmarnock walking group.

All of us returned to the RSPB cafe for refreshments. After Alison and Molly left, four of us visited the wetland bird hides, adding to our species count in a relaxing fashion. Some zebra spiders *(Salticus scenicus)* seen on last Sunday's recce were still on the same wooden fence. Our eventual departure from Vane Farm was well timed as the rain began shortly afterwards.

David Adamson

Pitlochry by train NN 938 582
14th April 2018, Leader: Sarah Adamson

After a cold damp spell our day in Pitlochry was pleasantly warm and sunny. A group of six set off alongside the Atholl Palace Hotel and its walled garden before entering the woods. David Adamson and Liz Kungu would only ever be the tail-enders; their mission to record mosses.
There was loud bird chatter and great spotted woodpecker *(Dendrocopos major)*, raven *(Corvus corax)* and nuthatch *(Sitta europaea)* sounds were easily picked out. There were a few plucky spring flowers - opposite-leaved golden saxifrage *(Chrysosplenium oppositifolium)*, lesser celandine *(Ficaria verna)* and wood anemone *(Anemone nemorosa),* also woodrush *(Luzula sylvatica),* hairy woodrush L. pilosa and Good Friday grass *(L.campestris).*
At the cottages above Black Spout a resident bird-feeder regaled us with details of his visitors which included siskin (*Carduelis spinus*) and the wily sparrowhawk (*Accipiter nisus*). His friend had reported seeing a goshawk (*A. gentilis*) and that the pine marten (*Martes martes*) had seen off the grey squirrels (*Sciurus carolinensis*).

Whilst off exploring, Erica Bright found the built tubes of caddis fly (*Trichoptera sp.)* larvae in the fast running burn. Later, two jellies, one immediately recognised as bachelor's buttons (*Bulgaria iniquans*). The other was amber coloured and resembled the ooze from fruit trees perhaps washed down by the recent rain. Although Black Spout is a popular destination, approached directly from Pitlochry, our wander took us to natural sights more exciting than the waterfall. However, the seat at the viewpoint was a useful lunch spot. David and Liz joined us briefly, but were then delayed looking at the mosses in the splash zone.

Along the field/wood boundary to Edradour we studied the fence posts adorned with mosses and lichens, creating stages for larch ladybirds (*Aphidecta obliterata*), stoneflies (*Plecoptera*) and a multitude of other small invertebrates. At this point Lyn Blades pointed out a red squirrel (*Sciurus vulgaris*) leaping between the tree tops and disappearing by the cottages, presumably to have a meal at the bird-feeders' cafe.

Molly Woolgar had travelled with us and had her own low level ramble. On the way home David saw cranes in a field near the railway. Liz stayed on to complete her urban moss record. The moss haul was at 100 plus - it has gradually crept up.

Sarah Adamson

Dunglass and Bilsdean NT 770 772
21st April 2018, Leader: John Palfery

This is the third field trip to this location in the last four years, all in April, and it provided by far the best weather: sunny and warm with temperatures reaching about 18°C in the early afternoon. There was a light southerly breeze but the sea was calm, albeit with a light haze.

Twelve participants met beside the old A1 road bridge and began by admiring the view of the gorge from the bridge. According to the AA Guide to the British Coast "three bridges soar over the valley, one of which, built in 1786, is nearly 130 feet high and was said, when it was built, to be the highest bridge in the world". Nowadays there are five bridges.

Chiffchaffs *(Phylloscopus collybita)*, willow warblers *(P. trochilus)* and blackcaps *(Sylvia atricapilla)* were all singing along the wooded dean, and jackdaws *(Corvus monedula)* were attending their breeding colonies around the two old road bridges. Moschatel (*Adoxa moschatellina*) was noted but not yet in flower, a sign of this year's late spring. At the beach the tide was already far out and the few sea birds seen even further out. Oystercatchers *(Haematopus ostralegus)* were the only waders in sight. Disappointingly, no diurnal migration was taking place, not even a single hirundine. At the mouth of the Dunglass Burn, one grey *(Motacilla cinerea)* and two pied wagtails *(M. alba yarrellii)* were flushed and on the cliff ledges to the south several fulmars *(Fulmarus glacialis)* occupied their nest ledges.

After lunch on the beach we climbed the Bilsdean Dean and followed the cliff-top path towards Thornton Loch. On the field headland some, but not all, of the plants found on previous trips were in flower: the rare northern dead-nettle *(Lamium confertum)* and cut-leaved dead-nettle (*L. hybridum*), but not red dead-nettle *(L. purpureum)* which was present in 2014 and 2015. The headland and dry stane dyke also provided three butterfly species: small tortoiseshell (*Aglais urticae*), peacock (*A. io*) and red admiral (*Vanessa atalanta*). A skylark (*Alauda arvensis*) sang over the plough and on the exposed rocks below the cliffs were small numbers of oystercatchers and shelducks (*Tadorna tadorna*). Two pairs of sandwich terns (*Sterna sandvicensis*) foraged over the sea. This is the largest of our breeding terns. A migrant, it spends the winter in West Africa. It gets its name from Sandwich in Kent where in 1784 a specimen was shot and first described to science.

Back in the Bilsdean woodland, sweet violet (*Viola odorata*) was in flower with its deep purple flowers and delicate scent; the large leaves are distinctive and furled inwards when young. In medieval Britain it was used as a strewing herb, a household air freshener. Growing in Bilsdean village was hoary cress (*Lepidium draba*), a plant introduced into Britain during the Napoleonic wars when following the Battle of Walcheren in the Netherlands, injured and sick soldiers were brought back home carrying the seeds of *Lepidium* in their palliasses which were stuffed with hay.

On the return to Dunglass we passed the Bilsdean rookery and several stone pines (*Pinus pinea*). In 1846 six specimens were planted on the railway embankment. The young ones growing today were planted by Railtrack in compensation for the felling of mature ones. The stone pines, the blue sky and the warm sunshine gave the end of the walk a distinct Mediterranean feel!

In addition to the birds, plants and butterflies mentioned above, we found three ladybird, two shieldbug and four bumblebee species.

My thanks to David Adamson for supplying comments on the plants and insects seen on the walk and the information on the bridges.

John Palfery

Dean Burn NT 212 675

1st May 2018, Leader: David Adamson

Although the two main themes of this field trip were bryophytes and lichens, in best ENHS tradition our group of five also looked at flowering plants and birds. Our route involved following the Dean Burn to arrive at the north side of Bonaly Reservoir, then making for the hollow behind Torduff Reservoir and Bonaly car park. The Dean Burn was new territory to most of us and helped give a sense of adventure to the outing.

After the familiar steep path through the conifer plantation we crossed a stile and descended to meet the youthful Dean Burn. Sheltered by the defile's steep sides we slowly worked our way towards the source of the burn, stopping every so often to look at the mosses and lichens on stream-side rocks. Native trees, particularly juniper (*Juniperus communis*), had been planted here, protected by a fence that kept out the sheep and deer. We then crossed another stile and emerged into heather moorland, taking lunch in the shelter of gorse (*Ulex europaeas*) bushes beneath which a white-tailed bumblebee (*Bombus lucorum)* was searching for a nest site.

The lichens were particularly luxuriant on some alder (*Alnus sp.*) trees below the wall of an old reservoir. Once we surfaced from its shelter the sunshine had gone and the wind strengthened, so any thoughts of a circuit of a very full Bonaly Reservoir were quickly abandoned. Two red grouse (*Lagopus lagopus*) were on the main path, a sign that they are returning to the east Pentlands. We took a slanting path following a rather monotonous sheepwalk, and only stopped when we reached the lichen-covered rocks behind Torduff Reservoir. In a patch particularly rich in *Cladonia* species Sue pointed out the lichen highlight of the day, *Cetraria islandica,* better known as "Iceland moss". Wilma then saw a kestrel (*Falco tinnunculus*) perched on the entrance to a nest box high on a larch tree. Finally, as we tried to distinguish the song of willow warblers (*Phylloscopus trochilus*) from a background of birdsong that was dominated by chiffchaffs (*Phylloscopus collybita*), we glimpsed a queen blaeberry bumblebee (*Bombus monticola*) feeding on willow flowers.

David Adamson

Newhailes NT326723
5th May 2018, Leader: Heather McHaffie

A fine sunny day beckoned, albeit windy, as we met at Newhailes car park, a group of 19.

As we made our way into the Estate, we came to realise the wealth of interest it provides for natural historians, as a result of having been in a wild state until the National Trust for Scotland acquired the property in 1997. The park area has a variety of arable weeds coming up in the re-sown meadow. There was a lot awaiting discovery, and Heather told us about the fascinating ways in which plants propagate and survive.

The smell of onions permeating the air was provided by garlic mustard, or Jack-by-the-hedge (*Alliaria petiolate*), and we passed ground ivy (*Glechoma hederacea*), white dead nettle (*Lamium album*), three-veined sandwort (*Moehringia trinervia*), common field speedwell (*Veronica persica*), ivy-leaved speedwell (*V. hederifolia*) and germander speedwell (*V. chamaedrys*) (with line of hairs down stem). Orange-tip butterflies (*Anthocharis cardamines*) (4 male, 1 female) and a peacock butterfly (*Aglais io)* fluttered by in the sun. In addition, many types of bumblebee (all queens) were identified at various stages of our walk, and David has kindly listed them for me: abundant: buff-tailed (*Bombus terrestris*), a few: common carder (*B. pascuorum*) and tree (*B. hypnorum*), two: red-tailed *(B. lapidarius),* white-tailed (*B. lucorum*), one: early (*B. pratorum*), forest cuckoo (*B. sylvestris*) and southern cuckoo (*B. vestalis*) - also a small orange-tailed solitary mining bee *Andrena haemorrhoa*, *A. scotica* and another unidentified *Andrena.*

Flowers included yellow comfrey (*Symphytum tuberosum*), and Russian comfrey (*Symphytum x uplandicum*), also ribwort plantain (*Plantago lanceolata*), hogweed (*Heracleum sphodylium*) and cow parsley (*Anthriscus sylvestris*) (just starting to flower), stinging nettle (*Urtica dioica*) with male and female flowers and lesser celandine (*Ficaria verna*) with yellow rust. Later we also found lesser celandine with black rust.

Several types of ladybird were seen - 7-spot (*Coccinella septempunctata*), a small 10-spot (*Adalia decempunctata*), and later on a cream-spot ladybird (*Calvia 14-guttata*). We also subsequently found a larval red-legged shield bug (*Pentatoma rufipes*) (looking like a slater), a violet ground beetle (*Carabus violaceus*) and an attractive green weevil with yellow footpads, on decayed pine. An insect sweep produced ruddy-nosed beetle larva (*Timarcha tenebricosa*) and nettle bug (*Heterogaster urticae*).

We spent some time with Heather, identifying the many trees, amongst which we were pleased to see a treecreeper (*Certhia familiaris*), and also later to hear the song of a goldfinch (*Carduelis carduelis*) and a chiffchaff (*Phylloscopus collybita*). Trees included a winged spindle-tree (*Euonymus alatus*), holly (*Ilex sp.*) in flower (enjoyed by the solitary orange-tailed mining bee (*Andrena haemorrhoa*) and a lime with nail gall (*Eriophyes tiliae*). We learnt that the ash (*Fraxinus excelsior*) is the only British tree that can change its sex, producing either male and/or female flowers, depending on the effect of the previous year's weather conditions. As we made our way round the estate and reached the East Coast rail route, we found young elm (*Ulmus sp.*) leaves. Elm flowers in early March, so by May the remains of the flowers are visible with seeds. We also saw male catkins on oak (*Quercus sp.*) - female flowers are small and come out later.

As we proceeded through woodland, we found brittle cinder fungus (*Kretzschmaria deusta)* (grey/white when young, black when old), a slime mould (white), barren strawberry (*Potentilla sterilis*) (terminal tooth on each leaflet no longer than the adjacent teeth), pink purslane (*Claytonia sibirica*) and wood anemones (*Anemone nemorosa*). We also looked at many sycamore (*Acer pseudoplatanus*) seedlings (which would normally have 2 cotyledons, but we found some aberrations with 3 and 4 cotyledons).

As we reached the meadow area, we found dove's-foot cranesbill (*Geranium molle*) and on the adjoining fence both 2-spot (*Adalia bipunctata*), 7-spot (*Coccinella 7-punctata*), and orange (*Halyzia 16-guttata*) ladybirds, and the instar (slater-like) of forest bug (*Pentatoma rufipes*) and red-legged shield bug. Also chiffchaff (*Phylloscopus collybita*) and whitethroat (*Sylvia communis*) were identified in the mixed hedgerow with song and flight. We found a violet ground beetle (*Carabus violaceus*), a green weevil with yellow markings and two butterflies - a small white (*Pieris rapae*) and a green-veined white (*P. napi*) along what is known as Ladies' Walk. This is an elevated broad, grassy walkway, raised by walls on either side, allowing impressive views of the surrounding landscape.

Four species of fern made their appearance: common male fern, (*Dryopteris filix-mas*), common lady fern (*Athyrium filix-femina*), broad buckler fern (*Dryopteris dilatata*) and scaly male fern (*Dryopteris affinis agg.)* which has golden scales. Heather helpfully explained their identifying differences.

Approaching the end of our interesting and enjoyable day, we found dog violets (*Viola riviniana*) and broom (*Cytisus scoparius*) in flower, also a hawthorn shieldbug (*Acanthosoma haemorrhoidale)* rather resplendent in its striking green and dark red-brown markings - and the final, not so welcome, discovery was New Zealand flatworm (*Arthurdendyus triangulatus)*.

Erica Bright & Heather McHaffie

Penicuik Estate NT 219 599
8th May 2018, Leader: Kevin Ingleby.

A good number of members met at the carpark and proceeded down the drive into the estate. We were greeted by singing nuthatches (*Sitta europaea*), goldcrests (*Regulus regulus*) and coal tits (*Periparus ater*). We progressed from the partially repaired mansion along the footpath to the White Gates which overlooked the River Esk. On the diagonal track down to the river our first flowering plants were discovered - white dead-nettle (*Lamium album*), opposite-leaved golden saxifrage (*Saxifraga oppositifolia*), celandine (*Fiearia verna*) and dog's mercury (*Mercurialis perennis*).

The recently reconstructed 'Roman Bridge' was examined, as we continued along the river-bank towards the Lower Pond passing a swamp of horsetail (*Equisetum sp.*) and willows on our right. Our first water fowl were dabchicks (*Tachybaptus ruficollis*) and moorhens (*Gallinula chloropus*), unexpectedly sparse. Crossing the North Esk bridge we followed the edge of the walled garden, disappointed not to find redstarts (*Phoenicurus phoenicurus*) but discovering a dipper (*Cinclus cinclus*) as we crossed the wooden footbridge and circled the garden to climb up to the Upper Pond. Because of Kevin's agreement with the Clerks to pursue his WEBs counts we were allowed into the relative privacy surrounding the pond. Several larger water fowl - mute swan (*Cygnus olor*), greylag geese (*Anser anser*), tufted duck (*Aythya fuligula*) and several dabchicks were seen. Great spotted woodpeckers (*Dendrocopos major*) were heard drumming and willow warblers (*Phylloscopus trochilus*) and blackcaps (*Sylvia atricapilla*) were singing territorially.

We returned via the old Penicuik House, where midst flocks of jackdaws (*Corvus monedula*) we examined the rebuilt stonework. Before reaching the car park, we were able to increase our bird-list by adding chiffchaff (*Phylloscopus collybita*), treecreepers (*Certhia familiaris*) and other tit species. It had been a pleasant day. Thanks to Kevin for his observational skills.

Neville Crowther

Alnmouth by train

12th May 2018, Leader: Sarah Adamson

It was an unusual starting time of 11.08 at Waverley Station, as the previous train was 08.00. We arrived at Alnmouth at about 12.15. Molly Woolgar set off towards the village.

Our circular route started by walking into Lesbury and eating our lunch on the Aln bridge. Rob Wallace and David Adamson were lured under the bridge by a speckled wood butterfly (*Pararge* aegeria). Rob then identified a solitary bee (*Anthophora plumipes*). Although very rare in Scotland it was common around Alnmouth. Rob had eaten his lunch on the train but David fasted a bit longer. Lesbury is a clean, rustic village with a cemetery, our second distraction. A patch of green alkanet (*Pentaglottis sempervirens*) lit by sunlight was the stage for further bees: more *Anthophora* and red mason-bee (*Osmia bicornis*) as well as some common bumblebee species.

Back on the circuit we followed the Aln which is tidal and has big loops and is surrounded by areas that regularly flood. The area inside one loop has been reclaimed and hosts a sewage farm, grazing areas and an oil seed rape field. There was a small number of regular birds and a couple of oddities: an Egyptian goose (*Alopochen aegyptiaca*) and a Muscovy duck (*Cairina moschata*). It was the time for St Mark's flies (*Bibio marci*) which were easily trapped by Rob's net swishing. He was able to show us a wide range of *Bibionidae* and point out their gender differences. The green of the May sward was broken up by intense yellow patches of robust dandelions *Taraxacum* sp. One turn in the river had a high sandy bank which had evidently had a recent slip, but there were still holes up near the turf, perhaps the work of sand martins.

Leaving the river and walking up towards the common gave us the opportunity to view the bends in the river. Reaching the summit (48m) of the common there were still primroses (*Primula vulgaris*) that had been noted in the February recce and it was possible to look out to sea. The common is enclosed but closely grazed by ponies. The nomad bee (*Nomada fabriciana*), which parasitises some *Andrena* species, was near nest holes in the compacted path. There were *Adrena* bees flying around. On the seaward side of the common the path ran alongside a golf course and a series of ponds which were in the process of having clearance work to remove some of the larger and closely growing trees.

Tea followed in the village, but the outing was not over. Molly returned to Edinburgh ahead of the main group - her highlights had been birds. She had watched a pair of nest-building sedge warblers (*Acrocephalus schoenobaenus*) and seen her target species, Sandwich terns (*Sterna sandvicensis*). The walk back to the station recrossed the Aln with saltmarsh both sides of the road. This turned up some more bees. The pathside celery-leaved buttercup (*Ranunculus sceleratus*) in full flower, and sea blite (*Suaeda maritima*) were typical of this habitat. Two locals were visiting to find a wood sandpiper (*Tringa glareola*) and we talked briefly about our observations and uses of green alkanet (*Pentaglottis sempervirens*).
Waiting for our return train the entertainment was provided by swifts (*Apus apus*), swallows (*Hirundo rustica*) and house martins (*Delichon urbica*).
Finally, as the delayed train crawled towards Edinburgh we watched, and were watched by, a red fox (*Vulpes vulpes*) in a field near Musselburgh.

Sarah and David Adamson

River Avon walk NS 983 770

15th May 2018, Leader: Kathy Buckner

The day was sunny, warm, with a light breeze...

A group of six of us met and proceeded over the bridge and along the river, with woodland edging of ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*), sycamore (*Acer pseudoplatanus*), pedunculate oak (*Quercus robur*), beech (*Fagus sylvatica*) and hazel (*Corylus avellana*). There were plenty of orange tip (*Anthocharis cardamines*) butterflies, and many flowering plants - red campion (*Silene dioica*), crosswort (*Cruciata laevipes*), dog's mercury (male and female flowers) (*Mercurialis perennis*), germander speedwell (*Veronica chamaedrys*) (identified by lines down both sides of the stem), bird cherry (*Prunus padus*), Himalayan balsam (*Impatiens glandulifera*), pink purslane (*Claytonia sibirica*), opposite-leaved golden saxifrage (*Chrysosplenium oppositifolium*) and leopard's-bane (*Doronicum pardalianches*), which flowers early in the Summer, marsh marigolds (*Caltha palustris*), sweet cicely (*Myrrhis odorata*), thyme-leaved speedwell (*Veronica serpyllifolia*), sweet vernal-grass (*Anthoxanthum odoratum*) (actually rather smelly, with the scent of hay), Good Friday grass (*Luzula campestris*), leaves of meadow vetchling (*Lathyrus pratensis*), and of common spotted orchid (*Dactylorhiza fuchsii*), greater stitchwort (*Stellaria holostea*), wild angelica (*Angelica sylvestris*) (a sign of good soil), tufted vetch (*Vicia cracca*) leaves and butterbur (*Petasites hybridus*).

St Mark's flies were abundant, and David Adamson identified a soldier beetle on raspberry, a 7-spot ladybird (*Coccinella septempunctata*) a hawthorn bee (*Andrena scotica*) and six bumble bee species, including forest cuckoo (*Bombus sylvestris*).

A dipper (*Cinclus cinclus*) could be seen foraging in the river, and we later saw a buzzard (*Buteo buteo*), a swallow (*Hirundo rustica*) and we found a hatched blackbird's (*Turdus merula*) egg.

As we made our way up the slope from the river, we found wood sorrel (*Oxalis acetosella*), colts-foot (*Tussilago farfara*) still in flower, hedge woundwort (*Stachys sylvatica*) leaves, hybris avens (*Geum x intermedium*) the cross between water avens (*Geum rivale*) and wood avens (*Geum urbanum*), crack willow (*Salix fragilis*), meadow foxtail grass (*Alopecurus pratensis*) (one awn like a fox's tail) and timothy grass (*Phleum pratense*) (with two awns like cat's ears)

We passed Kinneil Mill, where we found broad-leaved dock (*Rumex obtusifolius*) and wood dock (*Rumex sanguineus*) (with narrower leaves), and, after joining the John Muir Way for a short time, walked back along the road (described by one or two of us lagging behind as The Long March!) - but we were cheered to find a soldier beetle (*Cantharis decipiens*) on raspbrerry, false brome (*Brachypodium sylvaticum*), common ramping-fumitory (*Fumaria muralis*) and winter cress (*Barbarea vulgaris*).

Erica Bright & Marion Moir

Woodhall Dean SWT Reserve NT 685 734

19th May 2018, Leaders: Katty Baird & Lesley Fairweather

A small group gathered at the ford entrance to Woodhall Dean on a mild May Saturday morning at 9.30a.m. It had been cold the night before when Katty, Donald and Robert had put out seven moth traps between the ford and the old packhorse bridge. All was revealed by them as they started moving the egg boxes used to line the traps. The first one was a large poplar hawkmoth (*Laothoe populi*), which made the day for passing walkers to the reserve! The catch also included scalloped hazel (*Odontopera bidentate*), nut-tree tussock moth (*Colocasia coryli*), lunar thorn (*Selenia lunularia*), early thorn (*S. dentaria*), pale shouldered brocade (*Lacanobia thalassina*) and the beautiful white ermine (*Spilosoma lubricipida*). There were several brown silver-line (*Petrophora chlorosata*), green silver-line (*Pseudoips prasinana*) and scorched wing (*Plagodis dolobraria*), amongst the others. Many thanks to Pauline King who sent on the full list after the outing. A background of bird song from a whitethroat (*Sylvia communis*) and a garden warbler (*Sylvia borin*) continued throughout the moth identification process.

Before departing from the Ford at 10.30am, Sarah Adamson found a 10-spot ladybird (*Adalia decempunctata*), and during the day David Adamson came up with a solitary bee (*Andrena scotica*) and three bumble bees, white-tailed (*B. lucorum*), common carder (*B. pascuorum*) and buff-tailed (*B. terrestris*).

Adders (*Vipera berus*), were eagerly looked for on the knoll and beyond, but none were to be seen. The whole season was to be without sightings of adders, the first time for many years, which was disappointing for those walkers expecting to see them. The singing of warblers accompanied the group to the coppiced oak woodland containing the ancient and well-used badger sett and before we looked at it a male common redstart (*Phoenicurus phoenicurus*) made its presence known by singing strongly from the top of a tree. The well-worn badger track was followed through the carpet of bluebells (*Hyancinthoides non-scripta*) across the reserve to where a fine barn owl box, made by Peter Leach, was admired. (A tawny owl, (*Strix aluco*) has since been seen flying from the box). Returning to Tinker's Leap, where a bridge crosses the river, a large conglomerate rock was scanned with a hand lens by Neville for the rare lichen, *Gyalecta ulmi*. This lichen used to live on elm (*Ulmus sp.)* trees but with Dutch elm disease they are few and far between, so it was good to see the lichen had found another home. Many of the group were interested in the bryophytes around that shady area. Lunch was enjoyed at Crowther Copse and two ENHS members who had missed the start stayed for a chat. After returning to the central bridge by the circular path, the exit from the reserve was made by the "pond", adjoining the reserve, which was dug some years ago by the farmer to irrigate his potatoes. With new management the entrance and exit of the water is more controlled and hundreds of tadpoles were seen at the edge of the water. With the start of bracken (*Pteridium aquilinum*) growth it was good to be able to identify the brown silver-line moth (*Petrophora chlorosata*) after the morning tutorial - many thanks to Katty Baird and all those who gave up the urge to watch the royal wedding in favour of the bluebell beauty of the Scottish Wildlife reserve, Woodhall Dean.

Lesley Fairweather

Craigmillar Castle NT 282 707
May 23rd 2018

On a warm sunny evening three of us set off along Lady Susan's Walk on a short circuit of the park. In the late 19th century Lady Susan's Walk linked the Gilmour's family home at Inch House with their castle, by then a romantic ruin. Lady Susan had it planted with yew trees (*Taxus baccata*) and Norway Maple (*Acer platanoides*), both of which still grow there and which in autumn provide a contrasting show of bright gold and deep green.

Several ferns were growing in this area and Jackie Muscott explained the distinguishing features of each species. Further up were some clumps of leopard's bane (*Doronicum sp.*), a native of the mountains of southern and central Europe. Jackie pointed out that these were not the common leopard's-bane (*D. pardalianches*), but plantain-leaved leopard's bane (*D. plantagineum*), distinguished from *pardalianches* by its plantain-shaped rather than heart-shaped leaves and its solitary rather than clustered flower heads. Leaving the walk we crossed the grassland south of the castle. Clumps of grasses were in flower, most noticeably meadow foxtail (*Alopecurus pratensis*). The flower head resembles timothy (*Phleum pratense*) but is thinner and it flowers earlier in the year – April to June compared to June to August.

At the top of the hill we admired the magnificent sycamores (*Acer pseudoplatanus*) beside the castle. Here we heard a stock dove (*Columba oenas*) calling. Often overlooked when seen among wood pigeons (*Columba palumbus*) its call is distinctive: a repeated "coowup coowup coowup", often in groups of three and accelerating to a climax at the finish.

As we returned to our starting point, Jean Long spotted a clump of butcher's broom (*Ruscus aculeatus*) in one of the disused quarries among the woodland. It had been chopped and battered by picnickers looking for firewood but with luck it will survive. It is difficult to believe that it is a member of the lily family Liliaceae. According to *Flora Britannica* the stalks were once used to scour butchers' blocks and in the 17th century circles of its spiny stalks were placed around meat to keep out mice.

We arrived back at our starting point with the sun still shining, having enjoyed a pleasant and instructive amble with magnificent views and the feeling that Vlad was with us at least in spirit!

John Palfery

Ettrick Water and Philiphaugh Estate NT 459 283
26th May 2018, Leader: Jean Long

The last occasion the Nats visited this area was on 4th September 2010 when Jean Murray took us for a walk up onto Harehead Hill. With another Jean leading us in May we followed a very different route. The day was sunny and by the afternoon rather hot for walking. We started from Ettrickhaugh Road on the outskirts of Selkirk, taking the path that follows the Ettrick Water. There were flowers everywhere - a beautiful display of colour.

To begin with, cream coloured tuberous comfrey (*Symphytum tuberosum*) was much in evidence, but soon we were walking through deciduous woodland with a colour change to the red, white and blue of red campion (*Silene dioica*), stitchwort, both greater (*Stellaria holostea*) and the less common, wood (*S. nemorum*) and bluebells (*Hyancinthoides non-scripta*). Further along we found goldilocks buttercup (*Ranunculus auricomus)*, a small patch of star-of-Bethlehem (*Ornithogalum umbellatum*) and the beautiful meadow saxifrage (*Saxifraga granulata*) plus many other more common plants including water avens (*Geum rivale*) and wood crane's-bill (*Geranium sylvaticum*).

We made slow progress along the river bank as, apart from the many plants en-route, there were willow warblers (*Phylloscopus trochilus*) and sedge warblers (*Acrocephalus schoenobaenus*), chiffchaff (*Phylloscopus collybita*) and blackcap (*Sylvia atricapilla*) in the trees and swallow (*Hirundo rustica*), swift (*Apus apus*) and house martins (*Delichon urbica*) in the air, plus goosander *Mergus merganser*) on the river It was past noon by the time we reached the Murray Cauld and the small hydroelectric station. The first of its kind on the Tweed river system, it uses the river water to turn two Archimedes Screw Turbines, driving a motor which generates the electricity. Alongside the turbines a new salmon pass and an eel, lamprey and smolt chute allows fish to ascend and descend the cauld. Cameras sited here relay pictures to the salmon viewing centre.

By the river we found an interesting orange-striped stone fly (*Perlodes mortonii*). Nearby trees of bird cherry (*Prunus padus*) were shrouded in the webs of the cherry ermine moth (*Yponomeuta evonymella*) caterpillar.

We made it to the Meeting Pool where the Ettrick and Yarrow Waters meet, a good spot for lunch. Sand martins (*Riparia riparia*) flew around over the river. A common sandpiper (*Actitis hypoleucos*) was spotted and on the far bank a grey heron (*Ardea cinerea*) struggled somewhat to deal with its lunch of a good sized fish. Here we found the largest beetle of the day - a handsome longhorn *Pachytodes cerambyciformis.*

After eating we walked up through woods. Good specimens of chicken in the woods (*Laetiporus sulphurous*) and dryad's saddle (*Polyporus squamosus*) were found on decaying timber. We then crossed the road into the estate surrounding Philiphaugh House. Common dog violets (*Viola riviniana*) and figwort (*Scrophularia nodosa*) (complete with its figwort weevil (*Cionus scrophulariae*) growing on the roadside banks were added to our list. On a stinging nettle (*Urtica dioica*) sharp eyes spotted an orange ladybird (*Halyzia 16 – guttata*). On our way towards the house we followed an avenue lined with lime (*Tilia x europea*) and ash (*Fraxinus excelsior*). Then a detour to visit the Covenanter's Monument took us into an area of large conifers including Douglas fir (*Pseudotsuga* menziesii), giant fir (*Abies grandis*), noble fir (*Abies procera*) and deodar (*Cedrus deodara*). According to the inscription on the plaque the monument was "Erected by Sir John Murray to the memory of the Covenanters who fought and gained the Battle of Philiphaugh on the 13th September 1645". Soon after this we came to the front of Philiphaugh House, the home of Sir Michael Strang Steel.

The next place of interest was the beautifully restored Victorian walled garden with a big variety of immaculately kept vegetable beds and fruit trees. Nearby were glasshouses full of flowering plants. From there we followed a tree-lined estate road to a pond with a large patch of yellow water-lily (*Nuphar lutea*) before making our way down to the Watermill Café for much-needed refreshment.

After leaving we passed the salmon viewing station and one of the largest sawmill water wheels in Scotland. Next we went to look at a small area of woodland planted to celebrate the 75th anniversary of The Forestry Commission. Wilma remembered being present on that occasion.

To complete the circuit we followed the path by the mill lade back to the cars, adding even more to the plant list. Thank you Jean for another good day.

Lyn Blades

Craiglockhart Dell NT 221 708

30th May 2018, Leader: David Adamson

Having visited the Dell on the previous Sunday, and again on the morning of the field trip, everything was carefully planned for a walk of some two miles that covered both banks of the Water of Leith between the Visitor Centre and the bridge below Kate's Mill, returning to the Centre in good time for a cup of tea. The sun had been hidden by the east coast haar by the time our group of seven set off, but in most other respects this walk probably lived up to expectations.

Plantain-leaved leopard's-bane (*Doronicum plantagineum*) was flowering by the path above the grotto, John pointing out that each plant had one flower head, unlike the more common *D. pardialanche*s. Its neighbour, Wood Goldilocks (*Ranunculus auricomus*), had managed to hide itself simply by shedding its petals. Large parts of the “lost meadow” below Redhall Walled Garden were dominated by Russian comfrey (*Symphytum x uplandicum*) in its many shades of pink and purple. Nearby we found parent bugs (*Elasmucha grisea*) covering their eggs on birch leaves, and a small willow with glossy leaves was still in flower.

Having first met figwort weevils (*Cionus scrophulariae*) on last Saturday's walk at Philiphaugh, I was surprised when Sarah found them again on some plants growing beside the walled garden. There were about half a dozen clustered among the unopened flowers. Round the corner was a large patch of flowering hedgerow crane’s-bill (*Geranium pyrenaicum*), one of four or five Geranium species seen today. It was about this point in the walk that John saw his first swifts (*Apus apus*) of the year. Like some of the hirundines they appear to have arrived later than usual and in smaller numbers.

Close to some allotments we were able to compare a globular-headed cultivar of guelder rose (*Viburnum opulus*) with the more familiar wild form. Further on, past a clump of fly honeysuckle (*Lonicera xylosteum*), Steven took us to see some solitary bee nest holes in the riverbank. No bees were active, probably in part due to the absence of sunshine. In the next clearing was a large European Larch (*Larix decidua*), and some particularly aromatic hawthorn trees (*Crataegus monogyna*), all in full blossom.

Moving into the shade of the woodland after re-crossing the Water of Leith, we compared the muted shades of common male fern (*Dryopteris filix-mas*) with the bright yellow-green appearance of the scaly male fern (*D. affinis agg.*). Other shade-tolerant plants on this bank of the river were fringe cups (*Tellima grandiflora*) and piggyback plant (*Tolmeia menziesii*), both naturalised in the UK.

By the time we returned to the Water of Leith Centre we were ready for a cup of tea. Sadly our leader's planning was flawed, and the Centre was closing as we arrived. We had also managed to lose Jackie, somewhere in the appropriately-named lost meadow but she had her tea!
Otherwise all went to plan.

David Adamson

Springfield Mill and Maiden Castle NT 287 644

3rd June 2018, Joint meeting with TWIC – Leader: Graeme Wilson

This was an opportunity for TWIC to obtain some more records for the Midlothian local biodiversity site at Springfield Mill and the Maiden Castle and for the Nats to have the benefit of Graeme Wilson's experience mammal trapping. Graeme holds the required licence which allows him to set small mammal traps. On the previous day, he had set out 30 Longworth traps in five sites at Springfield Mill on the River North Esk. As he predicted, the dry spring had not favoured small mammals and out of the 30 traps we only had one wood mouse (*Apodemus sylvaticus*). We did, however, have quite a few slugs and snails including a number of white-lipped snails (*Cepaea hortensis*).

We then moved on to Hewan Bank SSSI and the site of the former Maiden Castle. The ice-age glacial sedimentary deposits here include two till layers and the sediments are of national importance, as they are a rare exposure of Midland Valley glacial sediments. It also meant a narrow path with steep drops to either side which were not to be recommended if you suffer from vertigo.

Wilma Harper

Burdiehouse Burn Valley Park NT 274 674

7th June 2018, Leader: Jean Long

On a wonderful sunny evening six of us gathered, joined by another en-route, just after Kaimes crossroads to walk from Straiton Road to Gilmerton Road along the Burdiehouse Burn, a two mile green ribbon running between housing estates. We learnt that Burdiehouse is a Scots derivative of Bordeaux House, associated with weavers who came over from France with Mary Queen of Scots and settled by the burn.

As we gathered we looked out onto a beautiful meadow of oxeye daisies (*Leucanthemum vulgare*) and red campions (*Silene dioica*), with swallows (*Hirundo rustica*) flying over and blackbirds (*Turdus merula*) and chaffinches (*Fringilla coelebs*) singing. We noticed in the hedgerow around the meadow that the leaves of the guelder rose (*Viburnum opulus*) were reduced to lace by little grey caterpillars. We wondered if these were sawfly. Wood avens (*Geum urbanum*) and meadow vetchling (*Lathyrus pratensis*) were also seen along with soldier beetles (*Cantharis sp.*).

We set off along the burn by the path edged with cow parsley or Queen Anne's Lace (*Anthriscus sylvestris*), creeping buttercup (*Ranunculus repens*), ground elder (*Aegopodium podagraria*), herb Robert (*Geranium robertianum*), garlic mustard (*Alliaria petiolata*), white dead nettle (*Lamium album*), shepherd's purse (*Capsella bursa-pastoris*), pineapple weed (*Matricaria discoidea*) and a variety of dog roses, pink, white and cream.

A great variety of trees were seen throughout. At the earlier part of the walk there were native and non-native younger trees, thought to be millennium planting- many of which were fruiting abundantly including: wild cherries (*Prunus avium*), varieties of willow (*Salix sp.),* ash (*Fraxinus sp.*), elder (*Sambucus nigra*) with the flowers coming out, silver birch (*Betula pendula*), aspen (*Populus tremula*), field maple (*Acer campestre*), other maples, a variety of oaks (*Quercus sp.)* and alder (*Alnus glutinosa*). We noted galls on the blackthorn (*Prunus spinosa*), thought to be pocket plum (*Taphrina pruni*).

Further on the area became more open and more grasses were seen, including meadow foxtail (*Alopecurus pratensis*), cocksfoot (*Dactylis glomerata*), meadow grass (*Poa sp.)* and red fescue (*Festuca rubra*). Yellow rattle (*Rhinanthus minor*) had been sown among them as a grass reduction method. Other flowers seen were lesser trefoil (*Trifolium dubium*), sweet cicely (*Myrrhis odorata*), fox and cubs (*Pilosella aurantiaca*), forget- me- not (*Myosotis*), soft lady's-mantle (*Alchemilla mollis*), common mare's tail (*Hipporus vulgaris*), yarrow (*Achillea millefolium*), hairy tare (*Vicia hirsuta*), tufted vetch (*V. cracca*), common vetch (*V. sativa*), nipplewort (*Lapsana communis*), hedge mustard (*Sisymbrium officinale*), crosswort (*Cruciata laevipes*), winter cress (*Barbarea vulgaris*), silverweed (*Potentilla anserina*), reed canary grass (*Phalaris arundinacea*), cut-leaved crane's-bill (*Geranium dissectum*), chickweed (*Stellaria media*) and tuberous comfrey (*Symphytum tuberosum*).

As we went along over Lasswade Road and under Gilmerton Dykes Street, towards Ellen's Glen we noted direction stones pointing to paths leading to various streets in the housing away from the burn. There were several very good information boards and also stone carved seats, including one with insects carved round the base. In the burn we saw water crowfoot (*Ranunculus aquatilis agg*) and monkey flower (*Mimulus guttatus*). Hart's tongue fern (*Asplenium scolopendrium*), common male fern (*Dryopteris filix-mas*), green alkanet (*Pentaglottis sempervirens*) and meadowsweet (*Filipendula ulmaria*) not yet in flower were nearby.

Entering Ellen's Glen the trees were more mature - yews (*Taxus baccata*), common holly (*Ilex aquifolium*), large horse chestnut (*Aesculus hippocastanum*), European larches (*Larix decidua*) were seen - this was part of Moredun Wood. Pendulous sedge (*Carex pendula*) was seen and leopard's-bane (*Doronicum pardalianches*). We were entertained by the lovely sound of song thrush (*Turdus philomelos*). Other birds seen and heard were the chiffchaff (*Phylloscopus collybita*), magpie (*Pica pica*), robin (*Erithacus rubecula*), blue tit (*Cyanistes caeruleus*), goldfinch (*Carduelis carduelis*), wren (*Troglodytes troglodytes*), blackcap (*Sylvua atricapilla*), jackdaw (*Corvus monedula*) and carrion crow (*corvus corone*).

Various bumblebees, a carpet moth, two-spot ladybird (*Adalia bipunctata*) and a white-lipped snail (*Cepaea hortensis*) were also seen.

Ellen's Glen was renamed in the nineteenth century by the builder of a row of cottages there, whose initials, along with his wife's, are engraved on the wall of one.

We emerged onto Gilmerton Road, feeling we had seen one of the hidden green gems of Edinburgh and a site for another good Nats outing in the future; many thanks, Jean.

Maggie McKenzie

Botanics Bioblitz

9th June 2018, Leader: Sarah Adamson

A Bioblitz at Royal Botanic Gardens Edinburgh was organised by Lucy Cooke of the Visitor Welcome Team. Her interest lies in the organisms that have found their own way into the gardens. Lucy regularly traps and identifies moths and monitors the uninvited nature as part of her job, helping people enjoy their visits. In the run up to the day the count of species had reached 999. The event coincided with the launch of the book 'The Lost Words' which includes some of the species in the garden. The Lost Words, written by Robert Macfarlane and illustrated by Jackie Morris, was a high profile publication linked with RBGE and the John Muir Trust.

There were talks, walks and fundraising events prior to the BioBlitz, during the opening hours of the Garden. The idea was that groups that were experienced in finding and identifying organisms would be there to guide visitors - ENHS, TWIC and experts on bats, spiders and bees. Moth and mammal traps were set the night before to show what moves around in the night. There were activities such as pond dipping and making bug hotels as well as opportunities to take part in bug hunts. Max Coleman collated and recorded the findings. Our Robert Wallace was the 'go to' person to identify the more difficult insects. Microscopes were available to aid in the identification of smaller organisms such as lichens and invertebrates.

The day itself was cool and breezy. The garden visitors were interested in what members of the groups had found and kept captive on their respective tables. Disappointingly, there was a reluctance to go and hunt for bugs. I wonder if a combination of high quality images, enthusiastic presenters on TV and a concern about 'dirt' has detached people from their natural environment. For RBGE the day was a success in that more species living in the gardens had been identified.

Sarah Adamson

Burnmouth to Eyemouth NT 963 607

24th June 2018, Leader: Iain Cowe

For the second successive year Iain Cowe led a large group from Butterfly Conservation and Edinburgh Nats along the Berwickshire coast from the village of Burnmouth, primarily to enjoy the wide range of lepidoptera in the area. Although this particular cliff-top walk to Eyemouth was familiar to most of us, by timing our visit for late June we were able to find species that had been scarce or absent on previous visits. In addition, the warm sunshine encouraged the butterflies to appear in good numbers, in total contrast to our chilly visit to Aberlady in July of last year. As well as butterflies and moths there was an abundance of other insect life, particularly on the umbels of hogweed (*Heracleum sphondylium*).

After parking just off the A1 we assembled by the village hall where Iain distributed some “freebies” marking national insect week. He then led us along the cliff-top path at the edge of the arable fields, the path-side vegetation being dominated by rank grasses and hogweed. After stopping for lunch, most of the Butterfly Conservation people retraced their steps to Burnmouth, but the 7 Nats joined Iain in walking all the way to Eyemouth.

At the highest point of the walk is an outcrop of Devonian sandstone, below which grow calcicoles aplenty. Among the flowers of wood vetch (*Vicia sylvatica*) and rockrose (*Helianthemum nummularium*) were many large skippers (*Ochlodes venata*), small blues (*Cupido minimus*) and northern brown argus (*Aricia artaxerxes*) butterflies, to name just 3 species. The numerous wall browns (*Lasiommata megera*) tended to live up to their name by keeping beside the clifftop wall. Iain saw a dark green fritillary (*Argynnis aglaja*), and others recorded large and small whites (*Pieris brassicae* and *P. rapae*) and a small heath (*Coenonympha pamphilus*). There were also lots of day flying moths which, apart from a middle-barred minor (*Oligia fasciuncula*) and a silver-Y (*Autographa gamma*), I would struggle to name.

At Gunsgreen was some different botanical interest, with the locally rare bog-rush (*Schoenus nigricans*) and distant sedge (*Carex distans*) growing at the edge of the rocky shore. On entering Eyemouth we watched a grey seal (*Halichoerus grypus)* being fed by tourists from a boat in the harbour. When the boat pulled away the seal duly followed, like a tame seal I suppose. Finally Iain had timed our arrival perfectly to catch the 15:02 bus back to Burnmouth.

David Adamson

Leadburn and Eddleston Water NT 237 544

26th June 2018, Leader: Wilma Harper

I had thought of calling this excursion “laybys off the A703” because both parts of this mid-week field trip started from big loop laybys on the Peebles Road. I had been on a Royal Scottish Forestry Society outing to the same areas and realised that the two sites would have potential for a Nats excursion. I was particularly keen for the group to see the effects of two very different habitat restoration projects.

Our first stop was the Leadburn Community Woodland. I remembered the site when it was owned and managed by the Forestry Commission and, with its proximity to the Northern Research Station at Bush, it was the site of a number of forest experiments. These are long gone and the site was purchased by the charity, Friends of Leadburn Community Woodland from the Forestry

Commission in February 2007. The site is managed for community use. The group have planted native tree species, started to restore a raised bog, created large ponds and retained some open areas.

The ponds are particularly good for dragon and damselflies and indeed Neville Crowther is part of the team which monitors these. One pond has a large bench or table on the bank and that proved a convenient place to sit and eat lunch or a snack while watching the insects on the pond and the surrounding area. On that day the species flying were four-spotted chaser (*Libellula quadrimaculata*), large red damselfly (*Pyrrhosoma nymphula*) and common blue damselfly (*Enallagma cyathigerum*).

The site and particularly the margins of the paths were good for butterflies including small pearl-bordered fritillary (*Boloria selene*) and the moths latticed heath (*Chiasmia clathrata*) and silver-ground carpet (*Xanthorhoe montanata*).

Despite a number of attempts to make them something else, we concluded that the many orchids were most likely to be (*Dactylorhiza maculata*), the heath spotted orchid.
Joanie McNaughton joined us a little after lunch and got a good view of a number of birds including a good photograph of a redpoll (*Carduellis flammea*).

On our way back to the cars, we stopped on the top of a bank to look over the whole site. During WW2, it had been an armaments depot and the bank we were on would have been the protective earth wall round a bunker. Some buildings remain including a curious one which might have been a packing point or laboratory and which had some very old owl pellets on the floor. Some of the paths follow the old railway lines which connected the depot with Rosyth.

More information on the Leadburn Community Woodland can be found at:
http://onlineborders.org.uk/community/leadburnwood

About 5 miles down the road, we stopped at another large lay-by. Here we wanted to look at work done to "re-wild" the Eddleston Water. The story goes that when the railway and road between Edinburgh and Peebles were being improved in the 19th century, rather than have to build multiple bridges across the burn, it was effectively canalised to run straight and generally parallel to the railway. However, this meant that water entering the burn moved rapidly and the peak flows were contributing to flooding in Peebles. A multi-agency project was set up lead by the Tweed Forum to show how modifications to the river and the catchment could alleviate flooding.

http://tweedforum.org/our-work/projects/the-eddleston-water-project/

http://tweedforum-org.stackstaging.com/wp-content/uploads/2018/08/Eddleston_Report_Jan_2017.pdf

In the area we went to look at, the course of the burn had been "re-meandered" by blocking the old straight channel and using natural barriers as far as possible to lengthen the course and provide a more natural floodplain. What was striking was the attractiveness of the site even relatively soon after the works. There was profuse water crowfoot (*Ranunculus aquatilis agg*) in the burn and water forget-me-not (*Myosotis scorpioides*) and monkey flower (*Mimulus guttatus*) on the bank.

When we did the recce, a common sandpiper (*Actitis hypoleucos*) was calling loudly nearby and we had to keep clear of a gravel area as we suspected its nest was there - no sign on the day however.

It has to be said that the path to and from the site was a bit overgrown in places but the small group who had stayed for the second part of the afternoon agreed it was worth the effort to see such an interesting transformation.

Wilma Harper

Harlaw to Red Moss NT 181 653
30th June 2018, Leader: Susan Falconer

Although Harlaw has been visited by ENHS several times in recent years, hot sunshine for a walk on the edge of the Pentlands was a novelty. At the outset Susan gave a short talk to the group of 12 about her previous work with the Regional Park, and explained her plans for today's field trip. The destination was the Robin Aitken bird hide at Bavelaw Marsh, via the north side of Threipmuir Reservoir and the SWT reserve at Red Moss. Although Susan also had suggestions for a circuitous return by Black Hill, in the event we simply retraced our steps by the main path by Threipmuir and Harlaw, that being the most direct route to the ice cream van.

As often happens, the party soon divided into a rearguard of botanists/ entomologists and a vanguard of generalists. As we walked by the reservoirs we noticed that the water level of Threipmuir, in particular, was very low due to the drought, and its wide sandy beach had attracted many sun-seekers, the more adventurous of whom had waded into the middle of the water. In contrast Red Moss was very quiet and we took lunch here, allowing the entomologists the chance to catch up and allowing the clegs the opportunity to feed on us. Pauline and Rob saw common lizards (*Zootoca vivipara*) beside the wooden walkway. It was a relief to reach the cool shade of the bird hide at Bavelaw Marsh. Most of the birds were having a pleasant Saturday afternoon, and only the swifts (*Apus apus*) appeared particularly active. One of the more unusual sights from the hide was a sheep that had strayed from some nearby field. We had noticed some evidence of its presence on the path to the hide.

On the return journey Rob swept the vegetation for insects, finding beetles, bugs and sawfly caterpillars, as well as spiders. Sarah had gone ahead and saw a couple of striped ladybirds (*Myzia oblongoguggata*) and some painted lady (*Vanessa cardui*) butterflies. However the most common butterfly species seen today were ringlets (*Aphantopus hyperantus*), which easily outnumbered all other butterflies. On hogweed (*Heracleum sphondylium)* were fearsome-looking flies called *Tachina grossa* but, in contrast to the horseflies, these didn't trouble us at all. Within, and close to Harlaw Wildlife Garden, were several bumblebee species – at least nine were seen today – and a longhorn beetle also found at Leadburn in midweek called *Pachytodes cerambyciformis*.

The ice-cream vendor did good business today, but the writer sadly missed out on this. Anyway, thanks to Susan for an excellent outing.

David Adamson

Ravelston Woods NT 222 745
5th July 2018, Leader: Jean Long

A group of 9 of us explored the woods at Ravelston on yet another glorious evening. We started out at the Queensferry Road entrance and climbed up the drive past a yew (*Taxus baccata*) with its “bundle of faggots” shaped trunk, a large variegated sycamore (*Acer pseudoplatanus*), common lime (*Tilia x europea*) and many other large trees. Along the path we saw ground elder (*Aegopodium podagraria*) in flower and enchanter’s nightshade (*Circaea lutetiana*), the presence of which indicates ancient woodland.

Jean then led us off the main drive on to a maze of paths which gave the impression of a much larger area as we criss-crossed the site from a central point marked by three large horse chestnut (*Aesculus hippocastanum*) trees. We first heard a little of the history of the area which was purchased in 1620 by the Foulis family who built the original Ravelston House and farmed the surrounding estate. The original house was destroyed by fire in the late 18th century, the ruins of the tower being all that remains. The house was subsequently rebuilt. The woodland eventually passed into the hands of Edinburgh Corporation in 1959. At the same time Ravelston House and 35 acres were sold to the Edinburgh Merchant Company and became the site of the new Mary Erskine School, the house being incorporated into the school buildings.

We were then shown one of two ice houses which were used to store ice cut in the winter to be used in the summer to keep food cool. We then climbed to the highest point where we stood on the edge of the old quarry and got a marvellous view looking north-west over the city suburbs as far as the Lomond Hills. Closer by, we saw climbing corydalis (*Pseudofilaria claviculata*). There were many impressive trees to be seen as we walked - numerous large Douglas firs (*Pseudotsuga menziesii*), Scots Pines (*Pinus sylvestris*) and larches (*Larix sp.*). We also saw lots or elder (*Sambucus nigra*) in flower a few maple (*Acer sp.*) and holly (*Ilex sp.*), some already showing green unripe berries.

Below there were ferns, including common male fern (*Dryopteris filix-mas*), broad buckler (*Dryopteris dilatata*), Hart's tongue (*Asplenium scolopendrium*) and bracken (*Pteridium aquilinum*). There were large areas of stinging nettle (*Ultica dioica*) and bramble (*Rubus fruticosus*) but there were also wood avens (*Geum urbanum*), rosebay willowherb (*Chamerion angustifolium*), broad-leaved willowherb (*Epilobium montanum*) and garlic mustard (*Alliaria petiolata*). There was also evidence of large areas of bluebells (*Hyacinthoides non-scripta*).

We meandered downhill to the lowest part of the site to see an area of badger (*Meles meles*) setts. There were several entrances, some appearing to be disused but others showing signs of present occupation and recent excavation.

Along the way there was quite a lot of fallen timber and some showed signs of badger activity as they searched for grubs and beetles in the dead wood. Surprisingly little fungal growth was seen, perhaps as a result of all the dry hot weather we have been enjoying, but some dryad's saddle fungus (*Polyporus squamosus*), *Trametes ochracea* and turkeytail fungus (*Trametes verisicolor*) were spotted. Along the way we enjoyed the background accompaniment of a song thrush (*Turdus philomelos*) in full voice and also, for a short time, a blackcap (*Sylvia atricapilla*) and the alarm call of a wren (*Troglodytes troglodytes*). We also saw evidence of great spotted woodpeckers (*Dendrocopos major*).

We viewed the large pond on the site where a moorhen (*Gallinula chloropus*) could be seen among the reeds but unfortunately access was not possible. We also viewed the adjacent area of the old quarry which had supplied sandstone for many notable Edinburgh buildings. We then walked back to our starting point via a small area of meadow where there was yellow rattle (*Rhinanthus minor*), hogweed (*Heracleum sphondylium*) and buttercups (*Ranunculus sp.*).

Dorothy Lyle

Bush Estate NT 247 636

7th July 2018, Joint meeting with TWIC – Leaders: Natalie Harmsworth and Douglas McKean

On a pleasant day, thirteen Members assembled for this joint excursion with TWIC, led by Natalie and Douglas.

Starting near the pond, we observed a 5-needle pine with distinctive large cones to 10cm. with tips of cone scales distinctly thickened, characteristic of Macedonian pine (*Pinus peuce*). Close to the adjacent car park was what appeared to be Turkish hazel (*Corylus calurna*) but Jackie was not so sure. She later found the bright green needles, white beneath, of giant fir (*Abies grandis*). In a heathy area also near the pond were common wintergreen (*Pyrola minor*) and Cornish heath (*Erica vagans*) with stamens protruding from the corollas - a first for me. Also in this area was a mature roble beech (*Nothofagus obliqua*), approximately 30m. tall and a fine specimen with long weeping branches. Beneath was a patch of vegetative heath (*Calluna sp.*).The pond was unfortunately rather overgrown with no open water. This had previously been a significant site for great crested newts (*Triturus cristatus*) but the introduction of sticklebacks (*Gasterosteus sp.*) and adjacent road-building ensured their demise. Emergents here included greater spearwort (*Ranunculus lingua*), common spike-rush (*Eleocharis palustris*), water horsetail (*Equisetum fluviatile*), lesser bulrush (*Typha angustifolia*), marsh marigold (*Caltha palustris*) and white water-lily (*Nymphaea alba*). A fine swamp cypress, (*Taxodium distichum*) was found nearby and many well grown conifers such as Scots pine (*Pinus sylvestris*), Lawson's cypress (*Chamaecyparis lawsoniana*), Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*) and in the gorge section were giant redwoods (*Sequoia giganteum*), tree rhododendron (*Rhododendron arboretum*), and shallon (*Gaultheria shallon*).

Earlier on the recce visit, the stream beneath the footbridge above the gorge had a beautiful show of greater cuckooflower (*Cardamine raphanifolia*). Reed sweet-grass (*Glyceria maxima*) and floating sweet-grass (*G. fluitans*) were found round the pond at the dam. Other plants in profusion were enchanter's nightshade (*Circaea lutetiana*), ostrich fern (*Matteucia struthiopteris*), white butterbur (*Petasites albus*), wood avens (*Geum urbanum*) and wood millet (*Milium effusum*). Other trees included the novel fern-leaved beech (*Fagus sylvatica cv. 'asplenifolium'*), Turkey oak (*Quercus cerris*), pedunculate oak (*Q. robur*), white cedar (*Thuja occidentalis*), Lawson's cypress (*Chamaecyparis lawsoniana*), Amur maple (*Acer ginnala*) and several more maples, cherries, birches and some Japanese skimmia (*Skimmia japonica*) in a wet patch.

Douglas McKean

Roslin Glen Country Park NT 272 628

11th July 2018, Leader: Marion Moir

At the start of the walk, in the carpark, we looked at a sown wildflower area which was humming with bumblebees and insects. In the undergrowth were upturned plastic flower pots intended for use as bumblebee nests. On some trees were solitary bee "hotels". During the whole walk David Adamson identified eight different bumblebee species, two of them being cuckoo species, including the tree bumblebee (*Bombus hypnorum*) which was first recorded in the Lothians in 2012 and is now very common.

The weather has been continuously warm for two months, so the growth of vegetation along the dell to the old gunpowder factory was impressive. David pointed out olive beard-moss (*Didymodon tophaceus)*, growing on a damp cliff to the right of the path. We looked at dead ash (*Fraxinus excelsior*) plants, recently planted, probably suffering from ash die-back and drew the conclusion that the disease might have been introduced from nursery source. A tortoise beetle (*Cassida sp.*) caused some comment, being on a nettle rather than the usual thistle, which is where a pupa was found. Pyrenean valerian (*Valeriana pyrenaica*) was growing to a height of six feet along the path, amongst enormous scaly male fern (*Dryopteris affinis agg.*) We were seeing ringlets (*Aphantopus hyperantus*) and meadow brown (*Maniola jurtina*) butterflies, and a light emerald moth (*Campaea margaritata*). Sarah had been in conversation with Ian about an app. for moths from Butterfly Conservation, “Moth of the Month”, which is useful for identification.

Dorothy photographed some moths and butterfly. The Comma (*Polygonum c-album*) which she photographed was laying eggs on nettle and was identified on Facebook by Iain Cowe as being of the summer generation, which he named as *Polygonia c-album ssp. c-album f hutchinsoni*.

The walk up the old railway line and round by the Scottish Wildlife Trust (SWT) wood was very pleasant. The woods were leased from the Crown Estates in 1980 by the SWT and the Friends are active in monitoring the bird counts.

On the way down the rather busy road to the carpark, three of the group took their lives in their hands and crossed the road to see the comma butterfly. Further down we found tansy (*Tanacetum vulgare*) just about to come into flower.

Marion Moir

Aberfoyle bus trip

14th July 2018, Leader: Committee

Our only coach trip of 2018 was to a venue visited around once every decade, and in keeping with tradition we crossed the River Forth and made for Kirkton churchyard where a headstone marks the spot where the Rev. Robert Kirk was buried over 300 years ago. Like many people of his time, the minister believed in supernatural beings such as elves, but Kirk went a bit further. He believed that he could communicate with them. Although he translated some of the Psalms into Gaelic he is now better remembered for his book "The Secret Commonwealth of Elves, Fawns and Fairies". In the churchyard Steuart pointed out a twentieth century headstone for a woman who died in a police station. The circumstances are not explained.

The first half of our walk continued on the Robert Kirk theme with a climb through oakwoods to the top of Doon Hill. On the way we passed a face carved on a tree, and then a fairy house made from a tree stump. This was covered in coins, presumably with the aim of keeping the elves happy. At the very top of the hill a tall Scots pine (*Pinus sylvestris*) towers over the other trees. This is sometimes called the Minister's Pine. The fairies are supposed to have been annoyed with Kirk for revealing secrets about their world, so they took him away and placed his soul inside the pine tree, leaving someone else's body in Kirkton cemetery. Actually the tree doesn't look old enough to have been around in Kirk's time, but why spoil a good story?

However, enough of legend and stories. After visiting Doon Hill we continued on our anti-clockwise circuit and took a left fork towards a wooden bridge, not shown on most maps, that re-crosses the Forth. Our route was well-marked, "Aberfoyle" being written large on signposts along the way. The last part of the walk followed the straight course of an old railway, taking a diversion near the end via the Aberfoyle Community Woodland path. The whole outing of just less than three miles somehow took over 4.5 hours to complete, so we must have found something of interest.

In an account of one previous visit, there is mention of bladder sedge (*Carex vesicaria*), beech fern (*Phegopteris connectilis*) and oak fern (*Gymnocarpium dryopteris*); we found all of these. We also saw goldenrod (*Solidago virgaurea*), common cow-wheat (*Melampyrum pratense*), a dragonfly, five bumblebee species, innumerable hoverflies and all three *hirundine* species plus swifts (*Apus apus*). Finally we enjoyed some overpriced ice cream in Aberfoyle, then joined the coach for the journey home - altogether a worthwhile way to spend a day.

David Adamson

Cammo NT 178 749

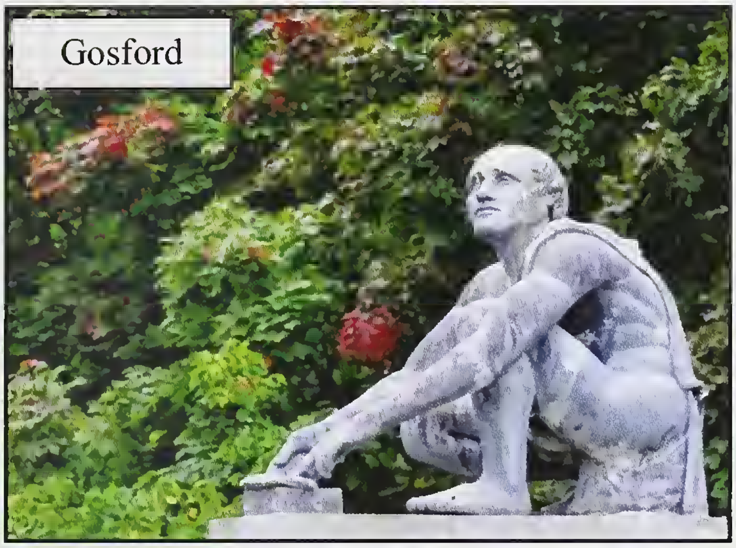
17th July 2018, Leader: Nick Benge

This was our opportunity to see the hedgerows, trees and wild-flower meadows that Nick spoke about after last year's AGM and which Nick and the Friends of Cammo have created in the last few years. We met outside the lodge where Nick told us that the west side of the estate was mainly old policy woodland, whereas the eastern half consisted of three old fields, North, Home and South Park. These had previously been used for agriculture and grazing, and the Friends have focussed much of their effort into improving the biodiversity of this particular area.

Trees have been planted, but need a lot of subsequent attention as most are not pioneer species and find survival to be problematic in an open landscape. Stressed trees are prone to insect attack. The Friends had beaten the branches of some young trees to dislodge the thousands of weevils that had been eating their foliage, and the weevils were not given the chance to return. As Cammo's roe deer (*Capreolus capreolus*) and rabbits (*Oryctolagus cuniculus*) eat the young trees, they have to be protected by tubing and netting. Half way up the tubes are letter-box-like apertures that allow heat to escape, but saplings often do not survive once the tree-tubes are removed because they lack the strength to withstand being buffeted by the wind.

orange tip

7-spot ladybird

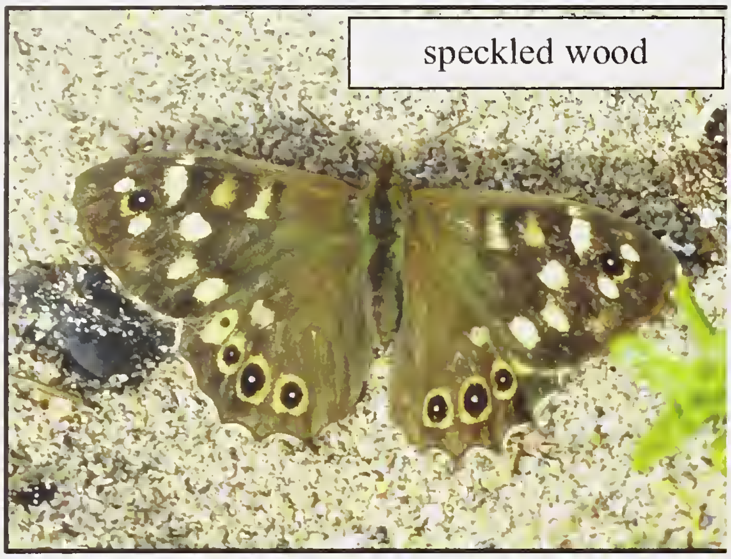

Gosford

jelly ear fungus

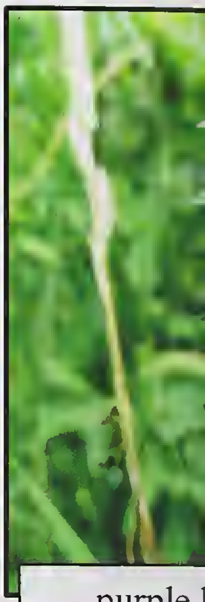
feathered thorn

2018 IN PICTURES

house sparrows


speckled wood

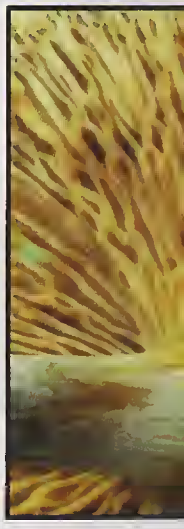
sphagna

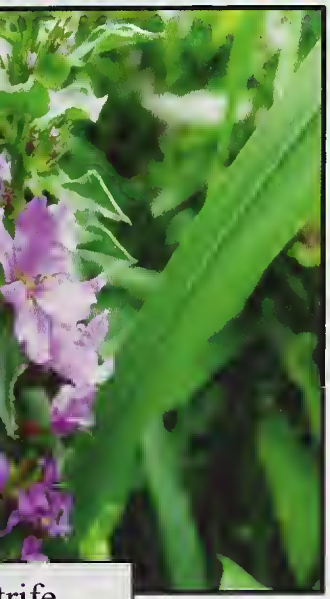

purple

great spotted woodpecker

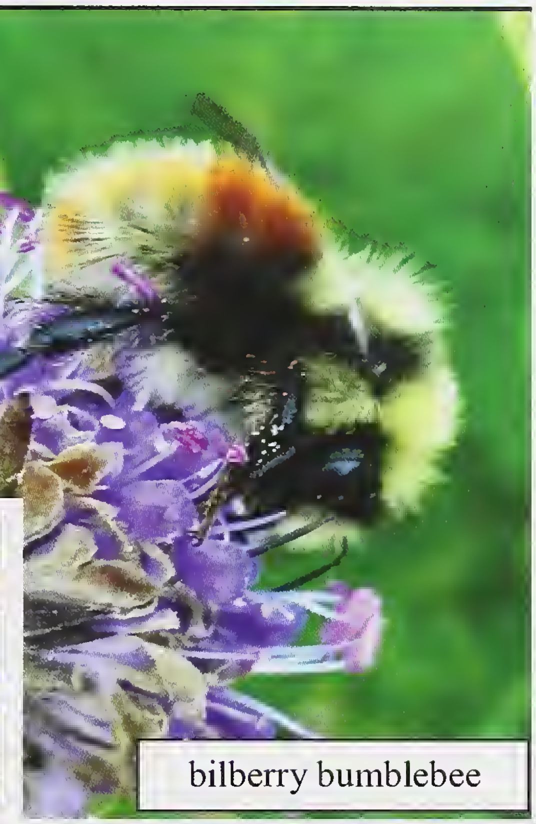
chicken of the woods

peacock




trife

striped millipede


bilberry bumblebee

treecreeper

4-spotted chaser

orange & 7-spot ladybird

snipe

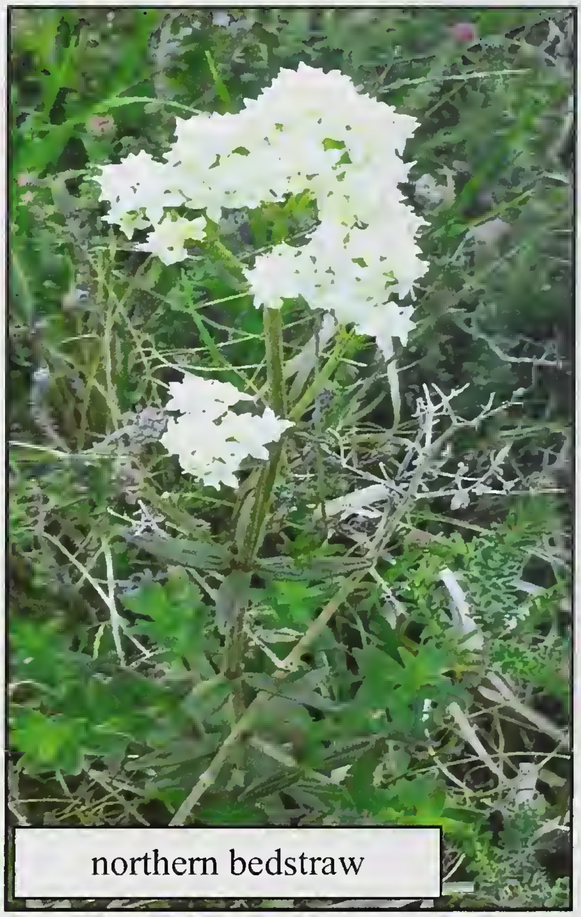
turkey tail fungus

comma

Selm Muir

Lecidea lithofil

tansy


northern bedstraw

The wild-flower areas have all been created by removing topsoil and by sowing with a seed-mix provided by Scotia Seeds. However, very slight differences in slope, soil, aspect and drainage allow some plants to dominate in one area whereas other plants find their niches elsewhere. Therefore, there is great variation of plant species both within and between patches of wild flowers. Immediately behind the areas from which soil has been removed the dominant plants are tansy (*Tanacetum vulgare*) and mugwort (*Artemisia vulgaris*).

After the departure of Nick and Michael from the Friends, we visited the arboretum near the site of the old house, looked at the "canal", which was a linear curling pond meandering through the overgrown walled garden which is likely to be the Friends' next major project. At one time Cammo seemed a bit neglected. It is a tribute to the energy of the Friends of Cammo that abandoned fields full of long grass have been transformed into new parkland and wild-flower meadows.

David Adamson

Bolton circular NT 506 700
21ST July 2018, Leader: Pauline King

This trip took place after a prolonged hot, dry spell (only a light shower the previous evening) and the list of finds was considerable – around 60 species of invertebrates alone. 14 members participated including one new member on her first field trip. The walk started along a field edge where yellowhammer (*Emberiza citronella*) and sedge warbler (*Acrocephalus schoenobaenus*) were calling. We saw goldfinch (*Carduelis carduelis*), buzzard (*Buteo buteo*), kestrel (*Falco tinnunculus*) and a brown hare (*Lepus europaeus*). We came across a wasps' nest in an abandoned rabbit burrow and our first of four 14- spot ladybirds (*Propylea 14-punctata*) was found and a 7-spot (*Coccinella septempunctata*). There was also water horsetail (*Equisetum fluviatile*), great hairy willowherb (*Epilobium hirsuitum*) and bird's-foot-trefoil (*Lotus corniculatus*). This first section also produced a female *Leptopterna dolabrata*, a cereal leaf beetle (*Ouelma melanopus*) and elongate grass bug (*Notostira elongate*), possibly the first record in Scotland, as distinct from *N. erratica*. More information may be found at https://www.britishbugs.org.uk/HetNews?HetNews21_Spring2014.pdf

Plants of note included fragrant agrimony (*Agrimonia procera*), scarlet pimpernel (*Anagallis arvensis*) and field woundwort (*Stachys arvensis*).

Other plant recordings made by Members included valerian (*Valeriana officinalis*), common spotted orchid (*Dactylorhiza fuchsii*), common eyebright (*Euphrasia nemorosa*), glaucous sedge (*Carex flacca*), toad rush, (*Juncus bufonius*), jointed rush (*J. articulatus*), compact rush (*J. conglomeratus*), sharp-flowered rush (*J. acutiflorus*) and Robin's pincushion (*Diplolepis rosae*). Insects included pollen beetles (family *nitidulidae*), hawthorn shieldbug (*Acanthosoma haemorrhoidale*), gorse shieldbug (*Piezodorus lituratus)* and nymphs, red-legged shieldbug (*Pentatoma rufipes*), burying beetle (*Nicrophorus sp.),* striped millipede (*Ommatoiulus sabulosus*), harvestman spider (*Phalangium opilio*), field grasshopper (*Chorthippus brunneus*) (purple form), common groundhopper (*Tetrix undulata*), green leafhopper (*Cicadella viridis*), marsh snipefly (*Rhagio tringarius*), blowfly (*Cynomya mortuorum*), *Grypocoris stysi*, bog hoverfly (*Sericomyia silentis*), marmalade hoverfly (*Episyrphus balteatus*), sawfly (*Tenthredo sp.),* nut leaf weevil (*Strophosoma melanogrammum*), common hawker (*Aeshna juncea*), dingy shell (*Euchoeca nebulata*), (a rare species in Scotland), ringlet (*Aphantopus hyperantus*), pale straw pearl (*Udea lutealis*), small skipper (*Thymelicus sylvestris*), peacock (*Inachis io*), small copper (*Lycaena phlaeas*), large white (*Pieris brassicae*), small white (*P. rapae*), green-veined white (*P. napi*), speckled wood (*Pararge aegeria*), silver-Y (*Autographa gamma*), shaded broad-bar (*Scotopteryx chenopodiata*), humming-bird hawk-moth (*Macroglossum stellatarum*), nine bumblebee species and honey bees.

There was considerable discussion later, on the Facebook page, regarding the strange features found attached to four banded longhorn beetles (*Leptura quadrifasciata)* - could they be pupae of parasites, parasitic wasp, or innards squashed out? Enquiries were made to the British Longhorn Beetle Recording Scheme who offered additional suggestions:-

"It could be that this beetle is simply slightly squished or it is a female and those could be ova from inside oozing out from an injury (the intersegmental joint just anterior also looks to have damage)."

This excursion took Members close to Eaglescairnie Farm, known for its programme of conservation work, and a possible venue for a future visit. The wide range of finds offered something for everyone and a number of Members returned later that evening to continue the exploration.

Pauline King

Selm Muir Wood NT 100 652

24th July 2018, Leader: Joanie McNaughton

Eight of us met at the small car park on the edge of this Forestry Commission Scotland wood. Known to date from at least 1860 and now a working forest, it comprises tree compartments within beech hedges, all of different ages. Species include mature Scots pines (*Pinus sylvestris*), younger sitka spruce (*Picea sitchensis*), with scatterings of rowan (*Sorbus aucuparia*), birch (*Betula sp.*) and willow (*Salix sp.*).

A hot, sunny day in the middle of what proved to be one of the hottest and driest summers for decades, we set off up the main central path in this new area to the Nats. Birdwise the middle of the day isn't known for much activity (I call it the avian siesta), so I wasn't expecting much. Highlights were hearing jay (*Garrulus glandarius*) and raven (*Corvus corax*) and seeing evidence of sparrowhawk (*Accipiter nisus*). David spotted a crossbill, probably *Loxia curvirostra*, high in the canopy on a second visit.

Lepidoptera abounded. Butterflies included meadow brown (*Maniola jurtina*), red admiral (*Vanessa atalanta*), green-veined white (*Pieris napi*) and ringlet, (*Aphantopus hyperantus*) with a good number of antler (*Cerapteryx graminis*) and shaded broad-bar (*Scotopteryx chenopodiata*) moths and a dead light emerald (*Campaea margaritarea*) lying on the path.

Flies were plentiful with several new species for me. Three such were noon fly (*Mesembrina meridian*), jet black colour with orangey-gold on the base of its wings. It is seen in late summer and autumn and breeds in dung; a pellucid hoverfly (*Volucella pellucens*) which favours umbellifers, its larvae living in the nests of social wasps and bumblebees, eating waste products and the bee larvae; a hoverfly bee mimic (*Cheilosia illustrata*), with a furry pale body, two black bands and dark wing cloud. It typically sits with its wings closed over its back. Here it was on hogweed (*Heracleum sphondylium*), its larvae tunnelling into the roots in autumn.

We found a good selection of ladybirds, namely 7-spot (*Coccinella septempunctata*), larch (*Aphidecta obliterata*) and, on the recce, cream-spot (*Calvia 14-guttata*). Also on the recce we found gorse shieldbug (*Piezodorus lituratus*), adults and 2nd and 4th or 5th instars. Bumblebees were plentiful, with ten species found.

Log piles proved to be a real treasure trove, particularly for mosses, liverworts and lichens where David identified at least seven species on the excursion itself and more on the recce. To name a few - *Scapania nemorea, Riccardia palmata, Dicranum scoparium, Lophocolea bidentata*. These piles were also good for lichens, specifically *Cladonia* and *Peltigera* species.

Although we didn't realise at the time, the highlight of the excursion, found on this same log pile, was a quite rare to Scotland false click beetle (*Epiphanus cornutus*). On posting an image on Facebook, Rob Wallace stated: "The antennae are distinctive with the last 4 segments much, much longer than the others. After a bit of hunting around, it looks a lot like this is *Epiphanus cornutus* –

a quite rare species of the family *Eucnemidae"*. Sarah, David and I returned a few days later and found it on the same bit of decaying wood. Only one previous reported Scottish occurrence was in Ayrshire some decades ago - awaiting iRecord confirmation at time of writing.

Lastly another rarity found – a 1940s rusted and mangled Volkswagen Beetle. There were no visible tracks to where it lay. We have no idea how it got there. So .... the Nats are good at finding beetles of all sorts!

Joanie McNaughton (and thanks to Rob Wallace)

Dalmeny shore NT 138 779
28th July 2018, Leader: Committee

This outing was arranged to replace the visit to Williamhope, which will hopefully take place in the next year or two. As well as being a good walk, the field trip had the aim of counting the field gentian (*Gentiana campestris*) plants in their only known West Lothian location at Hound Point. They appear to be threatened by bracken encroachment, trampling and the lack of respect for the environment shown by those who light fires in Dalmeny Estate.

For the first time since perhaps January, there was some rain on an excursion. The weather forecast may had deterred some from travelling by bus or train to Dalmeny Station, where four of us met with Susan Falconer, who had travelled from Fife. The rain was occasionally heavy, and we were all a bit damp by the time we reached the beach below the main path some distance to the west of Hound Point. We found a solitary plant of Scot's lovage (*Ligusticum scoticum*), growing at the same place that it appears to have been for decades. The small area of dune-slack habitat between there and Hound Point used to host a patch of the uncommon moss *Rhodobryum roseum*. The patch may still be there, but a deep path to the beach has been driven through the end of the dune-slack and the moss may have become a casualty. Happily we found some of it forming a patch about the size of my hand on a nearby tree root-bole.

A former MP for Edinburgh West, along with his family and some friends, were spending the morning cleaning up the beach. It is a great pity that this is necessary, but those who tackle the task of clearing up the debris left around bonfires, as well as picking up the rubbish washed up on the tideline, deserve our gratitude.

There were no gentians on Hound Point, in large part probably due to the drought. In the eighteen years or so that the Society has been monitoring this population, the numbers have varied from none to over seven hundred, and the poorest years have coincided with lack of spring and early summer rainfall.

Susan left us after lunch. Soon afterwards we found a dun-bar (*Cosmia trapezima*) moth that landed on the path beside us. A sign still points the way to Cramond Ferry, a service long since abandoned, but which would be most welcome. Keeping to the shore as much as possible we crossed the Cockle Burn without difficulty and only clambered up to the main path again when the beach ended. En-route we saw one painted lady (*Vanessa cardui*) butterfly and garden bumblebees (*Bombus hortorum*) on teasels (*Dipsacus fullonum*). The final stretch of our walk followed the John Muir Way through fields to the Queensferry Road, which we reached by the surprisingly early time of 2.00 p.m.

David Adamson

Black Devon and Cambus Pools NS 889 919

4th August 2018, Leaders: Wilma Harper and Sarah Adamson

Work on the Nats Summer Programme begins in earnest after Christmas with the Excursion Committee pulling together ideas of where might be good places to go. One day in January, after recce-ing an outing near Falkirk, Sarah and I went in search of two possible sites near Alloa. I had been at a conference of the Inner Forth Landscape Initiative where we had a brief visit to the RSPB's new site at Black Devon Wetlands and I knew there was an SWT site nearby. The brief visit in January satisfied us that this was worth adding to the programme, even though we had only got as far as the site boundary for the SWT at Cambus Pools before it was too dark to continue.

https://www.rspb.org.uk/reserves-and-events/reserves-a-z/black-devon-wetlands/

http://www.innerforthlandscape.co.uk/projects/conserving-restoring/black-devon-wetlands

Come August, the sites looked very different and we were hopeful of a good mix of things to see. Once we had all found the street to park for the RSPB Black Devon Wetlands we were soon in an area of mixed habitats, although with a definite post-industrial feel. No sooner had someone (I think it was Joanie) remarked that the thistles would be goldfinch (*Carduelis carduelis*) heaven than we were seeing and hearing flocks of around 150 of them. The correct collective noun is apparently a charm of goldfinch! Walking towards the hide, we caught sight of reed bunting (*Emberiza schoeniolus*) too.

The hide is actually more of a screen with interesting ironwork depicting the reserve through the seasons. However, the viewing ports were at heights which didn't suit most people so the temptation is to stand outside the screen where the view is better anyway. The bird life on the pond was essentially the usual suspects despite an attempt to make a young buzzard (*Buteo buteo*) into something more unusual.

However, behind us on the reconstituted plastic of the duckboards there was mega-excitement from Sarah and David. They had found an adult and a final instar nymph of a blue shieldbug (*Zicrona caerulea*) and a stunning metallic blue insect which was identified as a flea beetle (*Chrysomelidae*).

Looking at the lime (*Tilia x europea*) trees planted by the track, we found little protrusions on the leaves from lime nail galls. These are caused by the actions of a mite, *Eriophyes tiliae*.

Once we gathered everyone back to the cars, we drove a little further up the Forth to the village of Cambus. Lunch was taken on the benches and play equipment in the little park, and some of us even tried out the swings, unfortunately not captured on film.

On the road down to Cambus, we had driven past the extensive bonded warehouses where whisky is stored to mature. Some people had remarked on the blackening of the warehouses and indeed the houses and even trees in the village. The cause of this "soot" is the Angels' share fungus (*Baudoinia compniacensis*). It was first investigated in 1872 at the instigation of the French pharmacist, Antonin Baudoin, when a black growth was found on the walls and roof tiles of buildings near distilleries in Cognac, France. However, it was only in 2007 that a Canadian mycologist, Prof James Scott, isolated the DNA and proved the link between the fungus and the vapour given off from barrels in storage, known as the Angels' share. The most closely related *ascomycetes* to *Baudoinia compniacensis* appear to be members of the genera *Friedmanniomyces* and *Trimmatostroma*. *Friedmanniomyces* species are rock-inhabiting species known only from the Antarctic.

Cambus Pools is an SWT reserve where the River Devon (not the Black Devon) joins the Forth. They lie behind an embankment which also forms the path into the reserve.

https://scottishwildlifetrust.org.uk/reserve/cambus-pools/

Once through the blackened trees by the bond, we were in glorious sunshine and the insects were enjoying it as much as we were. The flowers of tansy (*Tanacetum vulgare*) were alive with hoverflies, probably *Episyrphus balteatus*, sometimes called the marmalade hoverfly. There were lots of peacock butterflies (*Aglais io*), small copper (*Lycaena phlaeas*) and the pale straw pearl moth (*Udea lutealis*). Other notables were an 11-spot ladybird (*Coccinella 11-punctata*) and a hairy shieldbug (*Dolycoris baccarum*) late instar nymph.

There had been reports of a water rail in the reeds by the pools but we found no sign. We did however see a snipe (*Gallinago gallinago*) which might just possibly have been a jack snipe (*Lymnocryptes minimus*) but in the end Steuart Ferguson was not sure enough to have it as a record.

We were directly across the Forth from the old armament depot at Throsk or Bandeath and through binoculars could see the old buildings, each separated a safe distance from one another. The site we had visited earlier in the summer at Leadburn must have looked very much like that, when it too was a naval depot.

Back in the village of Cambus, the garden of the Cambus Inn provided welcome refreshments and cake - and an interesting collection of Elvis memorabilia!

Wilma Harper

Prestongrange NT 371 738

11th August 2018, Leader: David Adamson

Last week we visited two “brownfield” sites near Alloa that are managed for wildlife. Prestongrange Industrial Heritage Museum is a former colliery and brickworks, described as Scotland's first industrial estate, and is even browner. Here, wildlife has been allowed to find a home on a site that has obviously not enjoyed the level of expenditure that is evident at, say, the Scottish Mining Museum at Newtongrange.

Seventeen of us met at 11:30. As insects, particularly butterflies and bumblebees, were today's main topic, this gave time for the day to warm up and encourage them to become active. It also coincided with the opening time of the museum, with its cafe and toilets. As well as meeting a new member, it was a pleasure to welcome back a former member, Mike Robinson, who was Butterfly Conservation's sole representative on this joint outing.

Progress was very slow because of the abundance of attractive insects. Buddleia (*Buddleja davidii*) bushes swarmed with colourful butterflies, while a row of birch trees was home to legions of shieldbugs of two species, and both adults and nymphs. Meanwhile Rob was finding insects that most of us overlook, particularly bugs and hoverflies. Jackie and Mary combined looking at insects with some botanical recording.

We crossed the road to Morrison's Haven, the old harbour which is now a grassy hollow. Here we stopped for lunch before winding our way to the higher ground on the headland towards Prestonpans. In the grassland were many meadow brown (*Maniola jurtina)* and small copper (*Lycaena phlaeas)* butterflies, and on bushes we found gorse shieldbugs (*Piezodorus lituratus)* and their eggs. One surprising find was a couple of solitary bees, *Colletes succinctus*, collecting pollen on heather (*Calluna vulgaris)*.

The final part of the walk, before refreshments in the museum cafe, was a visit to the sea wall at the east end of the ash lagoons. A grey seal (*Halichoerus grypus*), perhaps the same one as had appeared on the previous day's preliminary walk, surfaced beside the offshore rocks. After most of us had moved away to look at yet more buddleia bushes, Rob caught us up in some excitement and produced the find of the day, an Adonis's ladybird (*Hippodamia variegata*). As far as I am aware, this is only the third one to be found in or around Edinburgh, and all by Nats' members in the last year. It was good to end the day on a high note. For the record, our butterfly species count ended up at 11 (one individual was almost unrecognisable but may have been species number 12) and eight bumblebee species.

David Adamson

Baron's Haugh RSPB Reserve NS 756 553
August 18th 2018, Leader: Joanie McNaughton

Forecasted mist and rain, it was indeed a dreich day, but started out misty rather than raining. The reserve lies within the Dalzell Estate, comprising woodlands, grasslands, open water, marshlands and riverbank. Some woods were originally planted as shelter belts and screening or for hunting purposes.

We set off towards the haugh through mostly non-native woodland of predominantly horse chestnut (*Aesculus hippocastanum*), common lime (*Tilia x europea*) and beech (*Fagus sylvatica*), with unidentified poplar (*Populus sp.*). No birdsong at this time of year but we saw goldcrest (*Regulus regulus*), treecreeper (*Certhia familiaris*), great tit (*Parus major*), blue tit (*Cyenistes caeruleus*) and coal tit (*Periparus ater*), and a buzzard (*Buteo buteo*) mewing overhead.

We visited the Marsh Hide first via a path through the haugh. Along the way were the quite rare purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), marsh horsetail (*Equisetum palustre*), club-rush (*Schoenoplectus lacustris agg.*) and water horsetail (*Equisetum fluviatile*), hollow-stemmed and related to Juncus. The boggy water here had a noticeable rusty colour. The haugh is renowned for its wintering waders and wildfowl. From here we watched peewit (lapwing) (*Vanellus vanellus*), three black-tailed godwit (*Limosa limosa*), six snipe (*Gallinago gallinago*) giving us super views, three redshank (*Tringa totanus)*, teal (*Anas crecca*), wigeon (*Anas penelope*) and 12 dabchick (*Tachybaptus ruficollis*). Not yet departed summer visitors included swallow (*Hirundo rustica*) and sand martin (*Riparia riparia*). Continuing along the Lime Walk we arrived at the Causeway Hide where we were delighted to see two of our target species - a green sandpiper (*Tringa ochropus*) and three water rail (*Rallus aquaticus*) - I think an adult and two fledged chicks. There was great excitement at seeing the water rail, and I have to mention the photographer performing Houdini-like manoeuvres to get his camera lined up on them!

We had lunch on the banks of the River Clyde. It was nice to see the river looking so clean, considering how close it is to so much industry. I had been told to look out for kingfisher (*Alcedo atthis)* here, but we saw none at this spot today. Otter (*Lutra lutra*) is also reportedly seen in the river but sadly we were unlucky. Jean brought a marasmius fungus to look at. It was horsehair parachute fungus (*Gymnopus androsaceus),* where the gills are attached directly to the stem and not to a collar. A buzzard's constant mewing serenaded us whilst we ate.

The last hide, the Phoenix, proved even more profitable than the previous one. Firstly we saw four more green sandpiper, followed by an amazing display by 2 adult and 2 juvenile great-crested grebes (*Podiceps cristatus*). I read on the Lanarkshire RSPB Up-to-Date Wildlife Sightings web page that the pair had originally laid 3 eggs and three chicks had hatched. One of these two juveniles, presumably the last to fledge, was still being fed by one parent while the other was being warded off by the other, who clearly thought this offspring was well able to feed itself! While I was looking at a pair of gadwall (*Anas strepera*), another must-see for the Reserve and another target list tick, there was a shout of "kingfisher (*Alcedo Atthis*), it's on a post". In fact we saw two birds, albeit quite distant, but near enough to enjoy seeing the flashing blue and bright chestnut as they zipped back and forth from post to post. Pauline noticed a dead cormorant (*Phalacrocorax carbo*), or possibly it was Canada goose (*Branta Canadensis*), too distant to identify positively, hanging by its wings from barbed wire fencing.

The rain had started to fall in earnest just after lunch so we decided to call it a day and retrace our steps, taking the path to the car park through a wild flower meadow grassland area. Most of the flowers had gone over, but some insects were still able to nectar with three species of hoverfly and two of bumblebee - common carder (*Bombus pascuorum*) and white-tailed (*B. lucorum*).

I had hoped to do the full circle by returning via the Chestnut Walk, past the Old Graveyard, St Patrick's Well and Lord Gavin's Temple, which would have added a bit of history to the excursion and a lot more natural history. However we had a successful outing as it was and decided to leave the rest for another visit.

Joanie McNaughton

Ruby Bay, Elie NT 497 996

25th August 2018, Leader: Hannah Grist of Capturing our Coast and Committee

When we draw up the summer programme each year, we do try do cover a mix of habitats. We were fortunate in 2018 again to have a seashore field trip led by Hannah Grist of Capturing our Coast. This year we went to Ruby Bay on the east side of Elie. The bay is mainly sandy but at low tide there is quite an extensive area of rocks and rock pools to explore.

Paddling about in rock pools brings out the inner child in most of us but at the same time we were pleased to have Hannah's considerable expertise on hand to help identify our finds. The list from the rocky shore came to 44 species in all: brown seaweed 11, red seaweed 8, green seaweed 4, molluscs 8, fish 3, annelids 3, crustacea 3, others 4.

Not everyone was clambering on the rocks though. David Adamson and some others were finding plenty of interest above the high water mark and into the surrounding grassland. Bumblebees, butterflies and ladybirds were found as follows: buff-tailed bumblebee (*Bombus terrestris*), red-tailed bumblebee (*Bombus lapidarius*), painted lady butterfly (*Vanessa cardui*), small copper (*Lycaena phlaeas*), green veined white (*Pieris napi*), 7-spot ladybird (*Coccinella septempunctata*), 11-spot ladybird (*Coccinella undecimpunctata*) and a jumping beetle (*Sphaeroderma testaceum*). In addition, David and the landward group identified 8 mosses, 14 lichens and 19 species of higher plants.

With your head down looking at life in the rock pool it is easy to forget the incoming tide and a number of people had to make a hasty, and in some cases wet, retreat to the upper shore. It also signalled the time to head for the picnic tables by the beach car park and have our lunch. By the time lunch was over and we had said goodbye and thank you to Hannah, the tide had almost totally covered the rocks we had been exploring earlier in the day.

There was only a loose plan for the afternoon but we took our way along the path towards Elie Ness Lighthouse. Ptolemy McKinnon was using his well-honed spotting skills to pick out a good range of seabirds but the excitement grew when he saw a group of dolphin playing out in the Forth. It was hard to tell how many there were, probably between 5 and 10 and we were able to watch them at fairly close quarters for a good 10 minutes before they headed eastwards and towards the other shore. Not to be outdone by the other taxa specialists, Ptolemy's bird list for the day came to 40 species.

We got as far as the Lady's Tower on the other point of the headland. It was apparently built in 1760 for Lady Janet Anstruther to use as a changing room prior to her morning bathing routine. Other stories suggest it was perhaps a lookout or picnic area and the cave below a more likely location for changing before bathing. Sarah Adamson spent some time in that area searching unsuccessfully for Elie Rubies, which are in fact garnets, but was pleased to find 11-spot ladybirds (*Coccinella undecimpunctata*) were exploring the same piece of rock.

We returned to the car park having had a successful and very varied day by the sea.
The full species lists have been added to the records collected as part of the Capturing our Coast project and submitted to the Fife Biological Records Centre.

Wilma Harper

Portmore Loch NT 256 515
September 1st 2018, Leader: Becky Yahr

"Five go on bus" is not the title of an Enid Blyton story but describes the start of an adventurous day finding out about lichens at Portmore Loch. Leaving the X62 Borders Bus at the stop called Falla, we were passed by Fiona and Richard as they drove to the meeting point at the start of the track to Portmore Loch. Vlad and Tanya joined us while Richard left for a spot of hillwalking, so eight spent the morning and early afternoon peering through hand lenses at some minute crusts on pebbles and larger lichens on the ground, walls and trees. By the time we took lunch we had moved perhaps 400 yards in almost three hours, which is about average speed for those studying lichens.

The morning had been cool and overcast, but we set off briskly after lunch and halted at a dry stane dyke coated in the lichens of siliceous upland rocks. On the other side of the path was a patch of devil's bit scabious (*Succisa pratensis*) on which many insects were feeding. These included at least six bumblebee species (all males), many hoverflies and some moths. By this time Richard had rejoined us, having completed his hill walk and visited Northshield Rings hill fort. Soon afterwards the "official" part of the meeting ended, some departed, and the remainder followed Becky to the end of Portmore Wood and onto the shoulder of Dundreich where we eventually reached a col with another dry stane dyke. Here the lichens on the rocks formed intricate mozaic patterns which Becky photographed. The rest of us admired the views towards the Meldons and got onto hands and knees to look at yet more lichens. Our descent through some newly planted slopes was awkward but rewarding. We found three more ladybird species, some beautiful moths, saw a fallow deer (*Dama dama*), and even stopped to look at more lichens. It was around 18:00 when we crammed into Tanya's car for the trip back to Edinburgh at the end of a memorable day. Thanks especially to Becky for opening up the world of lichens to a group of relative novices, and to Tanya for driving us back to Edinburgh and for earlier pointing out a gloriously colourful blaeberry bumblebee (*Bombus monticola*).

David Adamson

Limekilns NT 075 834
September 8th 2018, Leader Malcolm Lavery

The area around Limekilns, an attractive village on the Firth of Forth, has much to offer, not only in natural history terms but also regarding its social and industrial past. With the prospect of a bright day ahead of us, we planned to spend the morning observing the flora and fauna in and around Limekilns, then to move on to nearby Charlestown where we could turn to geology and industrial heritage to expand our interest.

Setting off alongside the harbour wall, we headed east. With the tide well out and exposing good stretches of sand, many birds were in evidence. Tom had already discovered an interesting souvenir in the form of a beautiful heron wing feather, and we soon saw the first of several of these birds which were spotted stalking the water's edge between Limekilns and Rosyth.

Common wading birds including turnstones (*Arenaria interpres*) and a ringed plover (*Charadrius hiaticula*) were feeding along the shore, and on rocks beyond, several cormorants (*Phalacrocorax carbo*) stood, wings stretched out to dry. Scattered flocks of sandwich terns (*Thalasseus sandvicensis*) flew past near the shoreline and further out shelduck (*Tadorna tadorna*) and eider (*Somateria mollissima*) were noted on the water.

Passing the harbour we continued eastwards above the beach, with henbit dead-nettle (*Lamium amplexicaule*) and celery-leaved buttercup (*Ranunculus sceleratus*) growing by the path side. Other native plants included the dwarf mallow (*Malva neglecta*), black horehound (*Ballota nigra*) and wild marjoram (*Origanum vulgare*). Common mallow (*Malva sylvestris*) was also present though with only one magenta flower. Striking garden escapes included evening primrose (*Oenothera sp.*), tall plants with large yellow flowers which tend to come out late in the day, and red valerian (*Centranthus ruber*). This used to be rare in the Lothians, but is now spreading in Edinburgh, presumably as a result of global warming. Also present was foxtail barley (*Hordeum jubatum*), a striking grass with very long awns.

Insects seen at this stage included 3 bee species: buff-tailed (*Bombus terrestris*), red-tailed (*B. lapidaries*) and common carder (*B. pascuorum*), with butterflies: small tortoiseshell (*Aglais urticae*) and a green-veined white (*Pieris napi*) in good condition also coming out in the sun.

Three grey wagtails (*Motacilla cinerea*) in a group were hunting insects on the seaweed, with an aggressive robin (*Erithacus rubecula*) trying to see them off. Our most pleasing bird surprise of the day, however, came as we turned into the next bay to see a little egret (*Egretta garzetta*) gliding in to land.

Briefly visiting the ruins of 12th century Rosyth Old Church, the fungal species jelly-ear (*Auricularia auricula-judae*) was seen on a log, with shaggy ink-cap (*Coprinus comatus*) present in the churchyard too.

We followed the Fife coastal path inland, past blackthorn (*Prunus spinosa*) bushes that had a healthy crop of still green berries, and turned into a mixed woodland above the Rosyth Naval Dockyard. The summer drought hadn't encouraged much fungal growth and among the few species noted were the attractive porcelain fungus (*Oudemansiella mucida*) on a beech log, and honey fungus (*Armillaria sp.*) under a beech tree.

Beyond the wood and heading back down towards the village through farmland, agrimony (*Agrimonia eupatoria*), with its yellow flower spikes, was found growing in a hedge bank, and the butterfly count was increased with red admiral (*Vanessa atalanta*) and painted lady (*V. cardui*) spotted resting on a buddleia (*Buddleja davidii*) bush.

After a pleasant lunch in the sunshine by the pier side in Limekilns, we travelled up to nearby Charlestown to visit part of the Broomhall Estate woodland that is known for the presence of two significant limestone outcrops.

The wood itself was notable for the amount of false brome (*Brachypodium sylvaticum*) with its broad leaves and curving stalks of half a dozen long-awned flower spikes. Dog's mercury (*Mercurialis perennis*) was abundant, though with only leaves at this time of year. Both these plants are indicators of ancient woodland. There were also several plants of stinking iris (*Iris foetidissima*), native in England, but uncommon, and presumably naturalised, here. An unwelcome introduction at the edge of the wood was pirri-pirri burr (*Acaena novae-zelandiae*), whose arrow-headed seeds are spread on animal hair and human clothes.

At the top of the ridge, rearing out of the woodland are the impressive rock formations known as the Gellet Rock and Sentinel, left here when the outcrop of a limestone seam was quarried away around them. Now a favourite with climbers, they also offer considerable interest in natural history terms, particularly regarding their fossil content. The fossils, consisting mainly of crinoids or 'sea lilies' with some bivalves, date from the carboniferous period some 350 million years ago. In this period, Scotland lay near the equator and at times would have been covered by warm seas. Sometimes thought of as plants, crinoids are actually echinoderms, related to starfish and sea urchins. The limestone here is thought to represent coral reef-like structures and the beds of crinoids to be possibly storm deposits.

To finish our day we took a short trip down to the large limekilns complex on the waterfront which, back in the 18th century, made this area one of the biggest and most important lime works in Scotland. The extensive network consists of 14 limekilns, and has recently been carefully restored. The structure has provided a home for bats, and the restoration includes specially built brickwork to ensure they have continued access. Swifts (*Apus apus*) also nest here.

The area close to the kilns was botanically disappointing - overgrown above and little but gravel and a few struggling weeds below. However there were some young brassicas among the weeds, possibly oil-seed rape (*Brassica napus*). Small white butterflies (*Pieris rapae*) were taking an interest in them and examination of the leaves revealed they had been laying eggs.

This concluded the excursion, Members having enjoyed a productive day in an area which had not been visited by the society in recent memory.

Malcolm Lavery (with additional botanical notes from Jackie Muscott)

Blackness and Kinneil NT 053 801

15th September 2018, Leader: Steuart Ferguson

This outing was in 2 parts. In the morning we met at Blackness village and set off along the road above Blackness Bay towards the castle, before crossing to the east bay and returning by the woods edging the park.

The tide was well out and the birds widely scattered but we did see a range of waders, gulls and goosander (see full list below). Large white (*Pieris brassicae)* and painted lady (*Vanessa cardui)* butterflies were found by the shore. At the east bay the birds were again fairly distant but included terns, gulls, ducks, various waders and some distant greylag geese (*Anser anser*).

As a result, attention turned to the insects, including a *Metallina sp.* spider, many more large whites, small copper (*Lycaena phlaeas),* meadow grasshopper (*Chorthippus parallelus),* common carder bumblebee *(Bombus pascuorum),* 7-spot ladybird (C*occinella septempunctata)* and hoverfly *(Eristalis tenax).* An angle shades moth (*Phlogophora meticulosa)* landed giving a nice clear view. Several common darters (Sy*mpetrum striolatum)* were around and we were able to watch a pair egg- laying in the burn. Some germander speedwell (*Veronica chamaedrys)* with *Jaapiella veronicae* galls was found and, bird-wise, a number of passerines were flying around the woods.

After lunch on the seawall at Blackness, a short drive took us to Kinneil Kerse, a new site for most of the group. This is old industrial land by the River Forth and the mouth of the River Avon. Behind the sea wall is a sizable lagoon, popular with ducks and waders, particularly at high tide. This was a birding site, although a visit earlier in the year may prove more productive for other interests.

The main species present on the mud and sea were 250-300+ black-tailed godwit (*Limosa limosa*) plus numerous shelduck (*Tadorna tadorna*) and in the lagoon more black-tails, a flock of golden plover (*Pluvialis apricaria*) and a mix of other waders and ducks. Overall an interesting day.

Bird list. B=Blackness, K=Kinneil.
Cormorant (*Phalacrocorax carbo*) BK, grey heron (*Andea cinerea*) K, pink-footed goose (*Anser brachyrhynchus*) BK, greylag goose (*A. anser*) BK, shelduck (*Tadorna tadorna*) BK, Teal (*Anas crecca*) BK, mallard (*Anas platyrhynchos*) BK, eider (*Somateria mollissima*) BK, goosander (*Mergus merganser*) B, buzzard (*Buteo buteo*) BK, kestrel (*Falco tinnunculus*) K, oystercatcher (*Haematopus ostralegus*) BK, golden plover (*Phivialis apricaria*) K, lapwing (*Vanellus vanellus*) BK, dunlin (*Calidris alpina*) BK, black-tailed godwit (*Limosa limosa*) K, curlew (*Numenius arquata*) BK, redshank (*Tringa totanus*) BK, black-headed gull (*Chroicocephalus ridibundus*) BK, common gull (*Larus canus*) BK, lesser black-backed gull (*Larus fuscus*) BK, herring gull (*L. argentatus*) BK, greater black-backed gull (*L. marinus*) BK, sandwich tern (*Sterna sandvicensis*) B, feral pigeon (*Columbia livia*) BK, wood pigeon (*C. palumbus*) BK, swallow (*Hirundo rustica*) BK, house martin (*Delichon urbica*) B, pied wagtail (*Motacilla alba yarrellii*) B, grey wagtail (*M. cinerea*) B, dunnock (*Prunella modularis*) B, robin (*Erithacus rubecula*) B, willow warbler (*Phylloscopus trochilus*) B, blue tit (*Cyanistes caeruleus*) B, magpie (*Pica pica*) B, jackdaw (*Corvus monedula*) B, rook (*Corvus frugilegus*) B, carrion crow (*C. corone*) BK, starling (*Sturnus vulgaris*) BK, house sparrow (*Passer domesticus*) B, chaffinch (*Fringilla coelebs*) BK, goldfinch (*Carduelis carduelis*) BK, linnet (*C. cannabina*) B.

Steuart Ferguson

Gosford NT 457 794

18th September 2018, Leader Peter Leach

The Scottish Seniors Golf Championship was taking place across the road at Craigielaw. This made the eight NATS members who assembled at Gosford Estate feel relatively young.

Bats had been promised, but there was plenty of time before sunset for exploration and discovery. Trees were in full leaf, so initially we enjoyed the variety in the full canopy that a mature estate woodland brings. An old tool shed had many dozing nymphalid butterflies which gave us hope for bats elsewhere. Inside the wall enclosing the family mausoleum were many contemporaneous yew (*Taxus baccata*) trees and Douglas firs (*Pseudotsuga menziesii*) were occasional with their distinctive cones. The only other conifers were old and battered Scots pines (*Pinus sylvestris*), one on an island being the site of the heronry, now reduced in size with about 6 nests.

It was impossible to miss the constant movement and noise of the resident greylag geese (*Anser anser*), who clearly regarded themselves of social status equal to that of their landlord, the Earl of Wemyss and March.

The densely scaled cups of acorns from Turkish oak (*Quercus cerris*) were in their thousands on the grassland near to the lakes. We were disappointed how few flowering herbs were present, but the compensation appeared to be the recent crop of fungi. We were almost too late for the ceps or penny buns (*Boletus edulis*), but the abundance of the lawyer's wigs (*Coprinus comatus*) offered an opportunity to the mycological gourmets amongst us. Other fungi included two *Russulas, nobilis* and *atro-pupurea,* common in beech woods and several other 'inkcaps', including the delicate Japanese umbrella toadstool (*Parasolus plicatilis*) and the birch bolete (*Leccinum scabrum*). Several well-known saprophores found on tree stumps were - sulphur tuft (*Hypholoma fasciculare*) and *Pholiota squarrosa,* and on felled timber the artist's fungus (*Ganoderma australis & G. applanatum*) as well as species of *Stereum*, bearing resupinate spore bearing tissue.

Gathering dusk was a prelude to the bat walk but it was accompanied by light rain, which quickly became a steady downpour and saw participants retreating to the cars. No self-respecting bat was likely to be out in that!

A wasted evening? Certainly not. For all of the regal posturing of the greylag geese (*Anser anser*), they were outdone by the quiet dignity of their cousin, the snow goose (*A. caerulescens*) who flew in to light up the dismal weather.

Nev. Crowther & Peter Leach

Newhall Estate NT 161 559
September 22^{nd} 2018, Leader: Lynn Youngs

Seven members gathered in Carlops on a bright sunny morning to explore the grounds of Newhall Estate and the adjacent river glen of Habbie's Howe. A large skein of pink-footed geese (*Anser brachyrhynchus*) was flying overhead as we set off.

We started by walking up the quiet minor road to Kitleyknowe where we spotted black-headed gull (*Chroicocephalus ridibundus*) but no goldfinches (*Carduelis carduelis*) which had been seen in good numbers on the recce. Yellow monkeyflower (*Mimulus sp.*) and watercress (*Nasturtium officinale*) were seen growing along the banks of the small burn that flowed parallel to the road. We headed along the high bank of Habbie's Howe past mature trees including field maple (*Acer campestre*), horse chestnut (*Aesculus hippocastanum*), pendunculate oak (*Quercus robur*), European beech (*Fagus sylvatica*) and European hazel (*Corylus avellana*). Leaves were just turning into autumn colours and with the sunshine the orange, red and yellow hues were stunning. The range and abundance of fungi on this stretch of the walk was outstanding and included beechwood sickener (*Russula nobilis*), geranium-scented russula (*Russula fellea*), purplepore bracket (*Trichaptum abietinum*), amethyst deceiver (*Laccaria amethystina*) and porcelain fungus (*Oudemansiella mucida*).

Once in the glen a slight diversion was taken to see the delicate oak fern (*Gymnocarpium dryopteris*) and the remains of melancholy thistle (*Cirsium heterophyllum*). We also marvelled at a fantastic display of sheathed woodtuft (*Kuehneromyces mutabilis*) in pristine condition growing on a tree stump, for me one of the best sightings of the day. Piggyback plant (*Tolmiea menziesii*) was seen growing near the side of the North Esk and there was an abundance of opposite-leaved golden saxifrage (*Chysosplenium oppositifolium*) growing on the damp banks on each side of the glen. It was a very good day for ferns, and species seen included scaly male fern (*Dryopteris affinis agg.*), common male fern (*Dryopteris filix-mas*), hard shield fern (*Polystichum aculeatum*), soft shield fern (*Polystichum setiferum*), hard fern (*Blechnum spicant*), common polypody (*Polypodium vulgare*), lady fern (*Athyrium filix-femina*) and lemon-scented fern (*Oreopteris limbosperma*).

After lunch we continued through the Newhall Estate and briefly visited the large pond where we added mallard (*Anas platyrhynchos*), grey heron (*Ardea cinerea*) and moorhen (*Gallinula chloropus*) to our bird list. A few remaining swallows (*Hirundo rustica*) were flying over estate buildings near the pond and a red admiral (*Vanessa atalanta*) was also spotted, the only butterfly of the day.

On the return walk we added birch catkin bug (*Kleidocerys resedae*), 7-spot ladybird (*Coccinella septempunctata*) and the nettle-tap (*Anthophila fabriciana*) to our insect list. Other fungus seen included *Cortinarius*, lilac bonnet (*Mycena pura*), common rustgill (*Gymnopilus penetrans*), beech knight (*Tricholoma sciodes*) and chanterelle (*Cantharellus cibarius*). Close to Kitleyknowe we spotted the caterpillar of the knot grass moth (*Acronicta rumicis*) which was a great sighting to round off the day.

Overall a very enjoyable walk with a good mix of natural history sightings and everyone agreed that a return visit at a different time of year would be well worth doing.

Lynn Youngs

Birch catkin bug

Coalsnaughton to Gartmorn Dam NS 925 957

September 29th 2018, Leader: Wilma Harper

This field trip, a walk of about 8kilometres, started in Coalsnaughton at Muircot farmshop where Wilma distributed maps of the route for the day. These were downloaded from Opensource websites, each providing different details useful for the excursion, beyond the popular O.S. Sheets. An example is "Thunderforest Outdoors Map", for outdoor enthusiasts and contains landscape which is focussed on information about the natural world.

The area is of mixed woodland and the plan was to spend most of the time in the woods then work back to the starting point along the path by the dam for birdwatching. Luckily this also meant we were sheltered from the strong cold wind which we were exposed to, whenever out of the woods. Some of the finds which were a particular surprise on the day were spiked shield-bug (*Picromerus bidens*), feeding on a hairy caterpillar, solitary bee (*Lassioglossum sp.*) (probably *calceatum*) and a leafhopper (*Iassus lanio*). Fungi included white birch bolete (*Leccinum holopus)* and elfin saddle (*Helvella lacunosa*). It was also interesting to see a number of fresh *Amanita muscaria*, brightly coloured and growing together at various stages allowing observation of its development. There was also nodding bur-marigold (*Bidens cernua*) and several kinds of sphagnum moss and liverworts.

On the water were Canada geese (*Branta canadensis*), mute swans (*Cygnus olor*) with 2 whooper swans (*C. cygnus*), gadwall (*Anas strepera*), wigeon (*Anas penelope*), a pair of great crested grebe (*Podiceps cristatus*) and four goosander (*Mergus merganser*). The bird hide across the water from the sandmartin bank is locked and there was therefore no sheltered spot to settle down and watch the waterfowl. Jay (*Garrulus glandarius*) were heard in the woodlands but not seen. A great spotted woodpecker (*Dendrocopos major*) worked its way round on high, broken branches, oblivious to our attention. We were also lucky to watch the activity in the remains of a wasp nest at the path edge which had been scraped out by badgers.

We finished back at the Café in the Farmshop where we were able to start looking at some of the fungi we had collected, using various field guides, while enjoying the hot drinks and home baking.

Pauline King

Tyninghame NT 627 808

October 6th 2018, Leader: Ptolemy McKinnon

Starting out on a crisp, sunny morning at Tyninghame Links Car Park, the group of 15 headed towards Belhaven Bay along a track lined on one side with field maple (*Acer campstre*). Along this track, Jean spotted some porcelain fungi (*Oudimansiella mucida*). Before getting sight of the bay, Sarah found a 7-spot ladybird (*Coccinella septempunctata*) on a metal railing, shortly followed by an orange ladybird (*Halyzia sedecimguttata*) nearby. These insects would be starting to search for somewhere to hibernate over the winter and typically like fence posts or railings. Close to this spot, the fungus buttercap (*Rhodocollybia buttyraceae*) was growing.

The group then walked into an opening onto the beach with a view of the bay. Curlew (*Numenius arquata*) and cormorant (*Phalacrocorax carbo*) were seen immediately. Grey seals (*Halichoerus grypus*) were noticed hauled out on the sand across the bay, potentially non-breeders as the breeding season had started with cow seals pupping usually from October till January on the east coast of the UK. A few of us had our binoculars and telescopes out to spot what was about, with an immature gannet (*Morus bassanus*) being seen, as well as teal (*Anas crecca*) and red-breasted merganser (*Mergus serrator*). However, it was a lone grey plover (*Pluvialis squatarola)* found by Steuart that grabbed most people's attention. Others were focussed on the insect life, with large white (*Pieris brassicae*), red admiral (*Vanessa atalanta*) and small copper (*Lycaena phlaeas*) butterflies being seen. David also found a buff-tailed bumblebee (*Bombus terrestris*) while viewing the butterflies. Most were flying around patches of sea rocket (*Caikile maritima*) on the beach. This purple plant lined the edge of the beach margin with lyme grass (*Leymus arenarius*) growing into the spit of land stretching out into the bay, known as Sandy Hirst. Before heading out along this slither of land, Jean found a male common darter (*Sympetrum striolatum*) dragonfly on the edge of the woodland.

The group headed out along Sandy Hirst, firstly walking along the sand before crossing towards the salt marsh on the west side. The bird diversity continued with Pauline pointing out some rock pipits (*Anthus petrosus*) and soon after, 6 whooper swans (*Cygnus cygnus*) flew over, landing in the bay. More interest was to come, though, as we headed over towards the salt marsh. Here we had skylarks (*Alauda arvensis*) fly over and great views of little egret (*Egretta garzetta*), grey heron (*Ardea cinerea*) and greenshank (*Tringa nebularia*). There was also a big array of flora on and near Sandy Hirst, with Vlad and Jackie staying nearer the woodland while the rest of the group explored this spot of land. Some of the species found were a mayweed species (*Tripleurospermum sp.*), blue fleabane (*Erigeron acer*), grass-leaved orache (*Atriplex littoralis*) and sea aster (*Aster tripolium*), all coastal specialists. Some thrift (*Armeria maritima*) was still in flower as well. The group were soon to join Vlad and Jackie again at the lunch spot, but the thought of food was put on hold momentarily as there were views of a male yellowhammer (*Emberiza citronella*) and immature reed bunting (*Emberiza schoeniclus*) in gorse. The group was also treated to 58 (counted by Steuart) barnacle geese (*Branta bernicla*) flying overhead. They would most likely have been breeding in Svalbard as these waterfowl start to arrive in the UK in the autumn to spend the winter here.

We stopped under some sycamore (*Acer pseudoplatanus*) trees and an oak (*Quercus sp.*), where talk included the plants and birds seen. Insects were soon to be mentioned again though, as a female common darter was seen and soon after David found an 11-spot ladybird (*Coccinella undecimpunctata*) in the dunes. The majority of the group then headed onwards towards the sea, but David and Jackie stuck around the dunes where they would see painted lady (*Vanessa cardui*) and comma (*Polygonia c-album*) butterflies, making a total of seven butterfly species, quite remarkable in October in Scotland.

While many of us had reached a group of Scots pine (*Pinus sylvestris*) looking out for the goldcrests (*Regulus regulus*) among them, those at the back had found a few fungi species. These included brown roll-rim (*Paxillus involutus*), sulphur tuft (*Hypholoma fasciculare*), ochre brittlegill (*Russula ochroleuca*) and earthy inocybe (*Inocybe geophylla*). Most of these species are rather common in mixed woodland but were of great interest with quite a diversity in a small area. There was also to be some botanical interest near the pines in the form of lesser stitchwort (*Stellaria graminea*), lady's bedstraw (*Galium verum*) and white campion (*Silene latifolia*).

We then reached St. Baldred's Cradle with views out into the North Sea on which guillemots (*Uria aalge*), eider (*Somateria mollisima*) and Sandwich terns (*Sterna sandvicensis*) could be seen. It was soon noted that there was also a goosander (*Mergus merganser*) on the water. These birds come to the sea in winter from their upland river breeding grounds for the milder climate and food in coastal areas. Those not so driven by the avian fauna were focussed on the flora. Eyebright (*Euphrasia sp.*), cross-leaved heath (*Erica tertralix*), glaucous sedge (*Carex flacca*), Scot's lovage (*Ligusticum scoticum*), heather (*Calluna vulgaris*) and crested hair-grass (*Koeleria macrantha*) could be seen. A lichen was also found, *Ramalina siliquosa* which is typically found on the coast.

Heading back towards the woodland, Pauline noticed four chaffinches (*Fringilla coelebs*) down by the shoreline chasing each other. We passed many plants including hogweed (*Heracleum sphondylium*) and upright hedge parsley (*Torilis japonica*). On reaching beech (*Fagus sylvatica*) woodland there was a jay (*Garrulus glandarius*) calling. The day finished with Sarah finding a hawthorn shieldbug (*Acanthosoma haemorrhoidale*) near the carpark, actually on hawthorn (*Crataegus monogyna*), rounding off a lovely day, with great diversity.

Ptolemy McKinnon

Ratho - Norton Circuit NT 139 709

October 20th 2018, Leader: Kathy Buckner

Eleven of us assembled at the far west end of the Bridge Inn car park, housing having replaced the usual car park opposite Ratho Church. The morning was mild, but flocks of redwings (*Turdus iliacus*) and skeins of pink-footed geese (*Anser brachyrhynchus*) confirmed that summer was over. Despite this there were still plenty of plants in flower, and we didn't even have to leave the car park to find an alien plant from South Africa that seems to be spreading in the Lothians - narrow-leaved ragwort (*Senecio inaequidens).*

Many of us probably thought that the Ratho area held no surprises, but Kathy knew better. Having crossed above the motorway we followed unfamiliar paths past an old quarry and through the grounds of Norton House Hotel until we emerged from woodland in a field no distance from the main Edinburgh to Glasgow railway line. Here we paused for lunch before setting off again to follow a series of field boundaries. Then a busy little road took us back across the M8, and it was a relief to reach the quiet of the entrance drive to Ashley House. This building dates from the early nineteenth century and was renovated in the twentieth. It has an orangery that was familiar to Erica because she held her wedding reception there. We admired the line of listed buildings, including the stables and dovecot, as we climbed towards the Union Canal, returning to Ratho via the canal towpath. The outing ended for most of us with tea and scones in the Bridge Inn, although four did look round the churchyard after everyone else had left.

Jackie stayed with us for much of the outing, venturing well past the Norton House Hotel before returning by a slightly more direct route and at her own pace. As ever she recorded the plants along the way. The lack of sunshine and lateness of the season were the main reasons for the dearth of insects, but we did see one common carder bumblebee (*Bombus pascuorum*) and a few 7-spot ladybirds (*Coccinella septempunctata*), some apparently hibernating in a gorse (*Ulex europaeus*) bush. There were still a few fungi, including *Clitocybe nebularis* and *Marasmius rotula* and a large patch of dog lichen (*Peltigera membranacea*) in short turf outside the Norton House Hotel. Most of the mosses were a bit dry, but genera found included *Orthotrichum*, *Ulota* and *Zygodon*, all on trees.

If there is a message from today's outing, it is that even very well-known localities can have surprises and places to explore.

David Adamson

Longniddry Railway Walk NT 469 758

17th November 2018, Leader: Pauline King

Twenty participants arrived at the Cottyburn Siding car park and after some creative parking manoeuvres spent some time watching visitors to the bird feeders before setting off on National Cycle Route 76, a stretch of the Longniddry to Haddington Railway Walk via Redhouse Dene and Setonhill Wood.

The picnic area and car park at the siding (1846–1960) takes its name from the Coatie Burn which changes its name at the crossing of the railway walk and is then called Redhouse Burn* until it runs into Gosford Bay. (**running by Redhouse and through Gosford Demesne, a small stream or burn having its rise on the farm of Merryhatton, and running in a N. [North] westerly direction thro' [through] the farm of Redhouse to its influx with the sea).*

The area is managed with the help of East Lothian Rangers and Sustrans Scotland who had recently been scything to encourage wildflower growth and pollinators. The weather had been unseasonably dry and mild although colder (8^0C) on the day of the excursion. Berries still covered many of the hedgerows but the loss of leaves on the trees made bird watching easier and some of the expected winter visitors were seen. A fair number of fungi were also found despite the lack of rain and the thick covering of leaf litter. A badger sett was also observed, with several entrances appearing remarkably exposed and accessible on a bank of the burn.

We did not get quite as far as the ruins of Redhouse Castle but were reminded of the Hibernating Heralds project which encourages recording at this time of year, as this sparsely recorded moth may be found by checking ruins, outhouses and cellars.

Observations included:

Fungi: *Clitocybe fragrans, C. nebularis, Mycena stylobates, Psathyrella sp.,* glistening inkcap (*Coprinellus micaceus*), field blewit (*Lepista saeva*), dead man's fingers (*Xylaria polymorpha*), *Ischnoderma benzoinum.*

Ferns: hard shield fern (*Polystichum aculeatum*), hart's tongue fern (*Asplenium scolopendrium*).

Flowering plants: woodruff (*Galium odoratum*), yellow archangel (*Lamiastrum galeobdolon var argentatum*), Italian ryegrass (*Lolium multiflorum*), common field speedwell (*Veronica persica*), hawkweed ox-tongue (*Picris echioides*), hedge woundwort (*Stachys sylvatica*).

Birds: goldcrest (*Regulus regulus*), brambling (*Fringilla montifringilla*), redwing (*Turdus iliacus*), fieldfare (*Turdus pilaris*), nuthatch (*Sitta europaea*), tree sparrow (*Passer montanus*), bullfinch (*Pyrrhula pyrrhula*), yellowhammer (*Emberiza citronella*), long-tailed tit (*Aegithalos caudatus*), coal tit (*Periparus ater*), blue tit (*Cyanistes caeruleus*), great tit (*Parus major*), buzzard (*Buteo buteo*), sparrowhawk (*Accipiter nisus*), great spotted woodpecker (*Dendrocopos major*).

Invertebrates: 7-spot ladybird (*Coccinella septempunctata*), orange ladybird (*Halyzia sedecimguttata*), flat-backed millipede (*Polydesmus angustus*), ground beetle (*Carabidae*), spider (*Drapetisca socialis),* red-legged shieldbug (*Pentatoma rufipes*) nymphs.

Pauline King

Yellowcraig to North Berwick NT 515 855
1st December 2018, Leader: Peter Leach

Most of us were familiar with this walk along the East Lothian coastline from previous outings. At the start Fidra Island is offshore. Further on The Lamb marks the half way point. Once opposite Craigleith you are entering North Berwick. Familiarity does not breed contempt for such an interesting walk as this, and even the weather was kind to us after some cold, squally days.

From the car park we took a woodland path through Yellowcraig Plantation, emerging at the rocky outcrops where moonwort (*Botrychium lunaria*) appears each spring. Orange ladybirds (*Halyzia sedecimguttata)* were overwintering underneath sycamore branches; we must have found between 50 and 100. Sarah searched for, and found, smaller numbers of 7-spot ladybirds (*Coccinella septempunctata*) on some of the stunted Scots pine (*Pinus sylvestris*) growing behind the sand dunes.

Winter thrushes were difficult to spot in the sea buckthorn (*Hippophae rhamnoides)* thickets, but once the ornithologists in our party reached the beach they stood transfixed while scanning the calm sea through telescopes and binoculars. The birdwatchers were soon left behind, and the various groups only met up again at lunch time. They had seen great northern diver (*Gavia immer*) and red-throated diver (*Gavia stellata*) as well as more common species. Even where we sat at lunch there were sanderlings (*Calidris alba*) running along the tideline and a solitary grey plover (*Pluvialis squatarola*) stood silhouetted on a rock.

Afterwards we again divided into separate groups, some returning to Yellowcraig by the beach, others ending their walk at North Berwick, while a party of five took a slightly longer route and followed the John Muir Way, which runs slightly inland from the coast. As a fairly gentle rain was falling, and as much of this part of the John Muir Way is within North Berwick, we returned to

Yellowcraig at a good pace, the natural history highlight probably being a roe deer (*Capreolus capreolus*) that crossed a field in front of us.

Thanks to Peter for an excellent walk and for allowing us off the lead.

David Adamson

Union Canal, Ratho NT139 709

28th December 2018, Leader: Janet Watson

This walk along the canal towpath followed the route of one of our post-Christmas walks of a few years ago. My main memories of that occasion were the bitter wind that drove freezing rain and sleet into our faces, surprise at finding some snowdrops (*Galanthus nivalis*) in flower, and much relief when we reached the warmth and shelter of the Ratho Park Carvery for our lunch. The weather for today's walk could hardly have been better: mild, plenty of sunshine when we emerged from the shade, and a gentle westerly breeze. Perhaps the good weather helped boost the attendance.

Sixteen of us assembled at the far corner of the Bridge Inn car park, and all but one crossed the bridge to join the canal towpath. After just over two miles of straightforward walking most of us arrived at the aqueduct over the River Almond where we paused to admire the view of the river in the deep gorge beneath us. A cormorant (*Phalacrocorax carbo*) flew upstream between the piers of the aqueduct. The prospect of lunch was probably the main reason for our relatively speedy return journey to Ratho.

Natural history is not at its best in December. There were no birds at all on the canal. Most of us saw a party of bullfinches (*Pyrrhula pyrrhula)*, a couple of tree-creepers (*Certhia familiaris*), a large flock of pink-footed geese in a field (*Anser brachyrhynchus*) and a buzzard (*Buteo buteo*). Some also saw goldfinches (*Carduelis carduelis*) and redwings (*Turdus iliacus*). There were a number of fungi; Vlad identified a bracket fungus as *Bjerkandera adusta*, and we also saw *Hypoxylon fragiforme* (beech woodwart)*, Xylaria hypoxylon* (candlesnuff fungus), some *Flammulina velutipes* and *Coprinellus micaceus* (glistening inkcap). Mosses can be particularly noticeable in winter and early spring. Common feather-moss (*Kindbergia praelonga*) was common and producing abundant capsules. On some shady slopes were the miniature fern-like leaves of *Fissidens bryoides*, while curled hookmoss (*Palustriella commutate*) flourished where water trickled over a low wall beside the path.

The snowdrops were not yet in flower, but we did find the white flowers of the dead-nettle (*Lamium album*) as well as the yellow flowers of gorse (*Ulex europaeus*). At one point the canal bank was fringed with the large leaves of the invasive Pyrenean valerian (*Valeriana pyrenaica*).

Thanks to Janet Watson for, once again, arranging our post-Christmas walk and lunch at the Carvery, and for providing such clement weather.

David Adamson

The 2018 long summer excursion was based in Nairn, Moray and the following accounts give a flavour of Members' experiences:

Impressions of Nairn

Having been born and brought up in Elgin, this was my old home area, although I knew the area to the east much better. There was a refreshing mix of the familiar and the new in the places we visited. I particularly enjoyed showing people bits of the Cairngorms away from the popular areas and realised I had forgotten just how special Culbin was. When they say it is "lichen-rich", it means the entire forest floor is covered in lichen.

It was nice seeing the memorial to Mary McCallum Webster. I remembered a visit to Culbin with her and the Moray Field Club when I was at school. Ian Suttie, who designed the memorial, was my biology teacher and very supportive of me. More information about the memorial is available at:

http://womenofscotland.org.uk/memorial-stone-mary-mccallum-webster

It contains the inscription:

In memory of MARY McCALLUM WEBSTER FLS 1906 – 1985

A botanist who was an expert on the plants of the Moray area and wrote
The Flora of Moray, Nairn and East Inverness.
Her ashes were scattered here, at her own request, in the Culbin Forest she knew so well
and among the wintergreens, her favourite plants.

Erected by: The Moray Field Club

Designed by: Ian Suttie in conjunction with Moray Stone Cutters

Looking back on this Nairn holiday, I recall two further impressions:

Mixed feelings at the Belmaduthy Dam SWT site - botanically rich, particularly for orchids, but the juniper is infected with *Phytophthora austrocedri*, although some plants seem to be recovering and regenerating. More generally, being able to share interests and enthusiasms with the group in a relaxed way.

Wilma Harper

Nairn holiday highlights

Where to start? An excellent four days in areas that I personally had not visited before and every day brought wonderful natural history sightings.

The first day's walk at Upper Tullochgrue near Aviemore was memorable for superb sightings of dark green fritillary (*Argynnis aglaja*) and small pearl-bordered fritillary (*Boloria selene*).

The moths trapped at Maviston were simply outstanding and highlights included the spectacular poplar hawk-moth (*Laothoe populi*), ghost moth (*Hepialus humuli*) and map-winged swift (*Korscheltellus fusconebulosa*).

The long walk in Culbin Forest was superb and the abundance of common wintergreen (*Pyrola minor*) and serrated wintergreen (*Orthilia secunda*) flowers was just amazing – literally thousands of plants – and we were lucky enough to see two specimens of the special one-flowered wintergreen (*Moneses uniflora*).

Exploring the wet acidic moorland of Belmaduthy Dam (a gem of an SWT Reserve) made for a very enjoyable afternoon and highlights here were lovely specimens of fragrant orchids (*Gymnadenia conopsea*) and early marsh orchids (*Dactylorhiza incarnata*).

The final day at Findhorn Bay was cool and overcast but produced excellent sightings including small-white orchid (*Pseudorchis albida*), adder's-tongue (*Ophioglossum vulgatum*), 11-spot ladybird (*Coccinella undecimpunctata*) and a stunning display of bloody cranesbill (*Geranium sanguineum*).

Overall a very enjoyable trip that was over all too soon.

Lynn Youngs

The novice moth trapper at Nairn

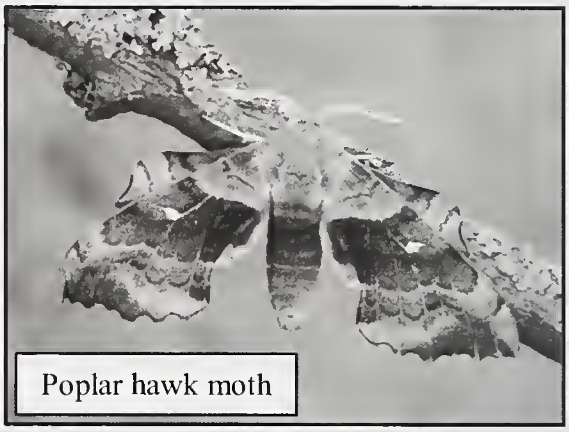
Moth trapping has two distinct stages: trapping and identifying/releasing moths.
Usually light traps are used to attract and hold night flying moths. A dark location is necessary and some equipment; a moth trap, a moth book, egg boxes, camera and a tame moth recorder. There are many types of moth trap and I had previously used Peter Leach's Skinner trap with an actinic light source at home. About two or three years ago it attracted about 70 moths overnight but recently only five. I wonder if light pollution may be a problem.

The second stage is opening the trap and identifying the contents. There is a moment of suspense and on our first morning in Nairn an unmistakable poplar hawk-moth (*Laothoe populi*) was immediately visible – a stunner, and enough to engage people. The remainder, although less spectacular, showed the diversity of pattern, colour and form expected from moths. Methodically, the egg boxes providing shelter, were inspected and photographs taken against the pale background of the boxes. Moths also settle on the trap, either in or outside, and on nearby walls and surfaces which needed to be checked. The moths were left in the trap for the lodge owner to see and re-wilded later in the day. The lodge was on the edge of Culbin Forest. Although the northern and eastern sides of the forest are well studied this area has a varied history of land use and undiscovered natural history. A full list of "catches" is given below:

Poplar hawk-moth	*Laothoe populi*
Map-winged swift	*Korscheltellus fusconebulosa*
White ermine	*Spilosoma lubricipeda*
Ghost swift	*Hepialus humuli*
Light emerald	*Campaea margaritaria*
Common white wave	*Cabera pusaria*
Garden carpet	*Xanthorhoe fluctuata*
Common marbled carpet	*Dysstroma truncata*
Green carpet	*Colostygia pectinataria*
Grey pine carpet	*Thera obeliscata*
Broom	*Ceramica pisi*
Peacock	*Macaria notata*
Peppered	*Biston betularia*
Barred red	*Hylaea fasciaria*
Four-dotted footman	*Cybosia mesomella*
Brown rustic	*Rusina ferruginea*
Smoky wainscot	*Mythimna impura*
Dusky brocade	*Apamea remissa*
Mottled beauty	*Alcis repandata*
Silver-Y (day)	*Autographa gamma*
Chimney sweeper (day)	*Odezia atrata*

Some moths were well known; the poplar hawk-moth, white ermine (*Spilosoma lubricipeda)* and ghost moth (*Hepialus humuli humuli*), and some certainty about others: an emerald, a wave, barred red and some carpets. These were tackled using a combination of Butterfly Conservation BC East

Scotland Branch website 'Moth of the Month', UK Moths website and the Moth Field Guide by Paul Waring. The most numerous species was the map-winged swift (*Korscheltellus fusconebulosa*). Darker coloured moths were difficult to identify and the local recorder, Michael Taylor, East Inverness/Nairn vice-county, identified these. The Moth of the Month photos were a good starting point and the narrative in the Field Guide made it a useful learning experience. The last two listed above are silver-Y (*Autographa gamma*) and chimney sweeper (*Odezia atrata*) which are both day flying and were not trapped. Using both scientific and common names helped in grouping moths and giving some information about a species such as colour or foodplant. 'Common' in the name is not always helpful and some of the common names are a bit whimsical, an example being the peacock moth (*Macaria notata*). I was surprised when it was named because none of my moths had appeared peacock-like, no eye like the peacock bird and butterfly. The wing mark is described as a 'paw mark'; the wings, however, are of a distinctive shape making the moth unmistakable.



Poplar hawk moth

After two weeks I was confident enough to submit my list to the recorder. The email included some narrative, attached spreadsheet and photos, and extra photos as a Google share. Michael preferred a spreadsheet in BC format to the online tool. I expect that the collection of names offered a good mental picture of the moths in that trapping.

If you are tempted, give it a go. Time is the most valuable tool. Use books and websites to confirm identification, don't rely on pictures and use the narrative to confirm identity, especially foodplant and distribution. A common difficulty is the condition of the moth and the quality of the photograph to compare with resources. Moths can look fresh and bright or be anywhere on the scale to a worn monotone and often need to be compared with one coloured drawing or photograph. The judicious use of an online forum can be useful or go along to some of the regular trapping sessions hosted by Butterfly Conservation.

Sarah Adamson

A note on Nairn

Lovely weather in lovely countryside. 'Birding' is more difficult now than ever before - spotted flycatcher (*Muscicapa striata*) darting behind leaves to feed young, not sitting on the tips of branches to catch flies, goldcrest (*Regulus regulus*) and crested tit (*Lophophanes cristatus*) in silhouette against blue, blue sky.

Easier sightings were red kite (*Milvus milvus*) and sparrowhawk (*Accipiter nisus*), above the trees, seen from the pond-dipping platform in the Fairy Glen, Rosemarkie.

On the shore by Findhorn Bay ringed plover (*Charadrius hiaticula*) behaved just like the books say. On shingle it can fade into the background. Its eggs are laid there and if the adult sits tight it is camouflaged and not obvious. However if she rushes around, your eye follows her and eggs or young are not discovered. This 'broken-wing display' as it is known, worked a treat at Findhorn: one adult but no eggs or young to be seen.

Molly Woolgar

Nairn with a B

Day 1 started with a lovely drive to reach Rothiemurchus by lunchtime.
After eating we moved onto Upper Tullochgrue where we had a circular walk in beautiful countryside. Reaching Nairn in late afternoon, B is for Melanie's super
B&B with its state of the art en-suite and smoked salmon and strawberry breakfasts.

Day 2 was an almost perfect day in Culbin Forest. I even enjoyed the ten mile walk, but not the nasty mosquito I met on the way. Hence B is for bite. On the following day the impressive Small Injuries Unit in Nairn treated the problem.

Day 3 produced no dolphins at Chanonry Point so we proceeded to Rosemarkie and had a pleasant walk by the river in the Fairy Glen. B is for our afternoon site Belmaduthy Dam a lovely SWT marsh with heather, juniper scrub and lots of plants, including orchids.

Day 4 started with a wander in the beautiful surrounds of Tall Pines Lodge. We just missed the red squirrels! Then it was to Findhorn Bay where the wind on the coast was very strong and we were glad when our walk took us inland toward the village. Before we left, Erica decided to visit the ice house while the rest of us explored the area around the car park. B is for beetle, the not-so-common, eleven spot ladybird found there. Also at the last minute David spotted the species of the day, small adder's tongue (*Ophioglossum azoricum*).

Day 5 B is for badger. How many people have been followed by a badger? While Sarah was finishing her housework, Helen and I had a walk in the area of the lodge.
We didn't see David's water rails by the loch, so we continued into the wood. When Sarah came to find us she watched a badger trotting along the path behind us.

Soon our holiday was coming to an end and we were on our way, taking an interesting route home in the sunshine.

Lyn Blades

Badger

Which organism was most often recorded during NATS excursions in 2018?

Answer on page 76

Indoor meetings

Urban raptors – the final frontier

17th January 2018, Mike Thornton

This first-of-the-year talk attracted a good number of Members, despite the forecast for heavy snow, and we were rewarded with an interesting and entertaining presentation by Mike Thornton.

Populations of raptors in the U.K. have experienced significant changes over the years, with low numbers due to persecution early in the 20th century, recovery during war-time and a further decline in the 1950s and 60s due to increasing use of pesticide. They are currently quite strong because of the protection provided by the Wildlife and Countryside Act of 1981.
Raptor prey species however, particularly woodland and farmland birds, have shown a decline since the 1970s, due largely to changes in farming methods and the increased use of herbicides and insecticides. This is thought to have led to an increase in the numbers of raptors living in urban areas, with cities like Edinburgh and Glasgow providing a suitably varied habitat, good nesting sites and abundant prey. Mike gave a number of examples of raptors, particularly sparrowhawks, living in these two cities, where both breeding density and breeding success were better than in rural areas. Mike went on to illustrate the current population status and the use of urban areas by peregrines, red kites and buzzards and to speculate on the possibility of goshawks, which live in a number of European cities, coming to the urban U.K.

This entertaining talk was concluded with lively questions and discussion.

Peter Leach

The Scottish wildcat; is there a hope for its conservation ?

14th February 2018, Lindsay MacKinlay of Parnassus Ecology

Perhaps an indication of the continuing pessimism about the future of our wildcat population is that this is the third talk we have hosted in the last decade on this theme. However there is always a measure of optimism in the short term by our speakers.

Lindsay has continued his research career on wildcats since 1990, when the use of radio tracking to follow movements began. Early work followed the progress of individuals in rabbit colonies, which are the main prey of our wildcat population. The accumulated knowledge gleaned in the last decade allows more than a glimmer of hope for strategies that could alter the difficulties faced.

The evolutionary history of the north-west European population has been revealed to start about 230,000 years ago, when a split from the ancestral type in both Europe and Africa took place. This break produced the ‘Wildcat’ and the ‘Common Cat’. The former is 35% larger than the latter and also has important differences in the pelage which provide a means of separation. The only problem is that for the last few hundreds of years, hybridisation has continued to reduce the wildcat gene pool as the population has suffered persecution. Surveys indicate that there are about 813,000 feral cats in the U.K, being the tip of a 1.5 million population. Their most important food source is rabbit. The hunting grounds are warrens in a mix of forestry and brash. High mountains are not occupied. The habitat range is between 60 and 350 hectares. Male kits are the first to leave the parental area in the first winter. Females stay in the home range and become fertile in January to August and carry one or two young.

Several 'Action Plans' have been mounted with the help of one million pounds of Heritage Lottery funding to identify pure wildcats in six priority areas in northern Scotland where captured domestic cats are neutered by vaccination before release. The use of camera traps enables a continual monitoring of the ratio of three types of genotype using a few visible characters. The wild type animal has a most distinctive pelage feature of a thick bushy tail with a bulbous end banded right down to the tip. They will also have a black band running the length of the spine but stopping before the tail begins. The R.Z.S. of Scotland also do D.N.A. monitoring in Strathspey using gene markers to select the closest to the wild types. Despite a methodology that suggests a positive outcome, only a small numbers of true wildcats have been identified - between 40 and 4000 from total captures of 115,000.
The public are encouraged to have domestic cats neutered especially in the 6 priority areas. Because of slack recognition followed by deliberate persecution, accidental elimination of wild populations continues. A national website for reporting results is available, which monitors the identification process.

Neville Crowther

The Smallest Kingdom – flora and fauna of the Cape of Good Hope

14th March 2018, Mike & Liz Fraser

Mike went to the Cape from Scotland in 1984 to work at the FitzPatrick Institute of African Ornithology at the University of Cape Town. Studying the effects of fire regime and alien-plant invasion on local birds, his research was carried out in the botanically megadiverse 'fynbos' of the south-western Cape, which characteristically consists of *Proteas, Ericas* and *Restios* vegetation, whose spectacular blooms were well illustrated.
This small area (470 square kilometres) is remarkable for the large number of plant species which occur, many of them endemic. This is recognised by its designation as one of six floral kingdoms (Boreal, Neotropical, Palaeotropical, Australian, Antarctic and Cape) and reflected in the title of this talk. We were treated to many photographs of diverse floral landscapes set against backdrops of ocean and mountains and the important part played by fire was explained and illustrated.
The plant diversity of this area was mirrored in the wide range of mammals, amphibians and reptiles present and the diversity of marine mammals, birds and fish which occupy the cold but food-rich waters.
This was a visual treat, an informative virtual journey around a remarkable location and a fascinating tale very well told.

Peter Leach

Members' Night

11th April 2018, Steuart Ferguson, Nev. Crowther & Malcolm McTavish

NATS Illustrated

Steuart Ferguson is a relatively new NATS Member and his photographs were all from excursions he had attended during the last 12 months. He pointed out that they had been taken with a new camera, as if that would account for the quality of the images, but the audience wasn't fooled and recognised the artistry and creativity of the photographer.

We were treated to a colourful show of mammals and invertebrates, lichens and fungi, birds and reptiles, flowering plants and the odd "unidentified" and were reminded of some of the wonderful places which had featured in the 2017/18 excursion programme.

Journey in North-West Scotland

Nev. Crowther took us to his favourite part of Scotland, with a photographic journey from Ullapool to Durness, with an accompanying commentary featuring geology, vegetation, animals and birds. We visited coast and hills, settlements and remote places and experienced something of the indefinable properties which make this such a unique area.

Introducing our new website

Malcolm McTavish has been developing a new NATS website and, after a certain amount of technical difficulty, gave an interesting presentation on what we can expect.
He briefly mentioned the three parts which would serve different functions:

- available to the public and the "shop front" for prospective Members
- available to current Members, with booking facilities and administrative functions
- a secure section for core NATS business and restricted to designated officers

His talk concentrated on the Members section and he illustrated ways in which bookings may be made, reports and photographs submitted, Members details kept up-to-date and membership fees paid.

This glimpse of a brave new world brought an interesting and instructive evening to a close with a vote of thanks to all participants from the President.

Peter Leach

Recording Nature on the Farm – Farming for Moths

26th September 2018, Teyl de Bordes. Farm Manager Whitmuir Estate Selkirk

Wilma opened the meeting with information on upcoming trips on the excursion programme and added that she and Vladimir had been invited to the "Capturing the Coastline" celebration and had been given a copy of the book which she will donate to the ENHS library.

Teyl explained that Whitmuir is at 900ft, on the edge of viable arable farming and how he has been involved in various schemes which have continually and rapidly increased the demands for data on biodiversity changes. To meet this demand, the help of Michael Braithwaite, for plants, and Douglas Methuen and Malcolm Lindsay, moth recorder for Selkirkshire, was enlisted to survey the farm. It was after this first encounter with a moth trap that Teyl became hooked on moths. Subsequently, lichen recording was added to the data being gathered and then, as the owners of the farm also have a farm in America which has an abundance of edible fungi, Neville Kilkenny came to survey the farm for fungi. With the help also from staff from Kew Gardens, 600 species of fungi have been identified including one species new to science identified using DNA. One of the fungi described was known as the Smurf fungus due to its blue colour. However, this colouration only lasts a day and therefore finding it after that can be difficult. Teyl expressed concern about the possible effects of farming methods on fungi and other organisms and explained that there are no regulations which give effective protection.

Orchid recording has become important but there is a difficulty because of the greatly variable numbers from season to season. From the original five records there are now sometimes more than 4000.There have also been 130 lichens and 112 mosses recorded

Of the 92 bird species, there have only been four pairs of lapwing, the monitoring of which requires a lot of resources. The oystercatcher pair which nest on the tin hay shed roof have yet to raise a brood to adulthood. They have become used to the chick being helped from the roof by Teyl when ready but due to predation they do not reach maturity.

Whitmuir Loch has large reed beds which are used by starlings, encouraged by 2 hectares of planted bird seed crop plus winter feed which costs £700per annum to provide. Monitoring of skylark population is done by a B.T.O. volunteer who goes out at night through the stubble fields. Numbers are currently around 200-300.

Lothian and Borders Mammal Group conducts spring and autumn counts using live traps and the farm is the most counted spot in Scotland for small mammals. However the data from the traps is not consistent with the data from owl pellet collection, which shows a different picture of small mammal populations.

The second part of the talk was dedicated to moths (1400+ species on the farm) starting with the question, “What is the difference between butterflies and moths?” Despite various suggestions from the audience, no one came up with the answer – butterfly eyes are on stalks, moth eyes are not. Using stunning pictures of moths from the farm Teyl explained that there are so many things still to be discovered about moths - their life cycle, the effects of habitat changes and the impact of ash die-back on sallow moth populations. All the recording that is being done is invaluable when applying for grants. However, there is still little incentive for land managers to look after these populations and the question remains, what does the future hold for them? Brexit remains a further issue. Teyl was keen however to ensure that the message this evening should not be gloomy and encouraged everyone to speak up wherever possible, to highlight the importance of protecting habitats and species.

Pauline King

Biological recording matters

24th October 2018, Natalie Harmsworth, TWIC

For some time there has been a degree of cooperation between TWIC and NATS, with joint excursions and the submission of Members’ records, so Natalie’s presentation on the nature and importance of biological recording was timely and welcome.

After defining biological recording (*documenting of an observation of an organism in a particular place and time*) and establishing its importance (*you cannot protect wildlife if you don’t know it’s there*) we were introduced to the “four W’s” –

WHO, WHAT, WHEN and WHERE

Who? – name of recorder	What? – name of organism
When? – date of observation	Where? – location

Sounds simple? There is plenty of room for ambiguity, confusion and uncertainty but Natalie gave clear and concise guidance and examples of how, where and when recording might be done.

We were also given very helpful information on aids to identification, analogue and on-line recording and where to send records.

End-of-talk questions covered a wide range of relevant topics and included a number of Members’ examples of both good and bad recording experiences.

It was an extremely educational and useful talk enjoyed by all.

Peter Leach

Tristan da Cunha- the Loneliest Isle

26th November 2018, Mike Fraser

Mike Fraser came to give a talk to the group again after having spoken about the Fynbos of South Africa last year. This time the subject was a little more remote - the isles of Tristan da Cunha. Mike had experience of islands before this adventure, having been warden on the Isle of May, including a spell of four months straight on the island without coming off. The invitation to join the expedition came at short notice - after getting a phone call on a Wednesday, Mike was off on the next Saturday into the south Atlantic.Having flown to South Africa, he travelled in the ship Agulhas to Tristan da Cunha, overshooting originally by one day before arriving and seeing Tristan with its 2060 metre high conical volcano.

Mike's talk started by focussing on Inaccessible Island, one of the three main islands making up Tristan da Cunha, the other two being Nightingale Island and Tristan da Cunha itself. Inaccessible was poorly known and studied scientifically. In 1922, the Quest Expedition visited before the main scientific study was done by a Norwegian expedition in 1938. No one had ventured in the following forty years on an expedition to study the island until the team Mike was on reached Inaccessible in 1982. The island has very steep cliffs, but there is one landing area called Blenden Hall, where the expedition team arrived by helicopter. They stayed in a hut in this area of the island to carry out the work. This came with its challenges as the wind turbine powering the generator was blown away after three days.

Mike then showed photos of Inaccessible Island and its wildlife, starting with South Hill, a volcanic plug reaching 1000 feet above sea level. At the top of the island, there is a mainly boggy area and on the slopes are *Phylica* trees, of African origin. The team would walk under these to get up to the top of the island and have a look at some of the roughly 150 plant species known on the island, most of South American descent. Moving from flora, fauna photos were shown with sub-antarctic fur seals (*Arctocephalus tropicalis*) and elephant seals (*Mirounga leonina*) present. There was one species of bird which may have reminded Mike of his Isle of May experience. This was the antarctic tern (*Sterna vittata*) which superficially resembles Arctic tern (*Sterna paradisaea*). Some other bird photos included were of northern rockhopper (*Eudyptes moseleyi*), sub-Antarctic skua (*Stercorarius antarcticus*) and common noddy (*Anous stolidis*).

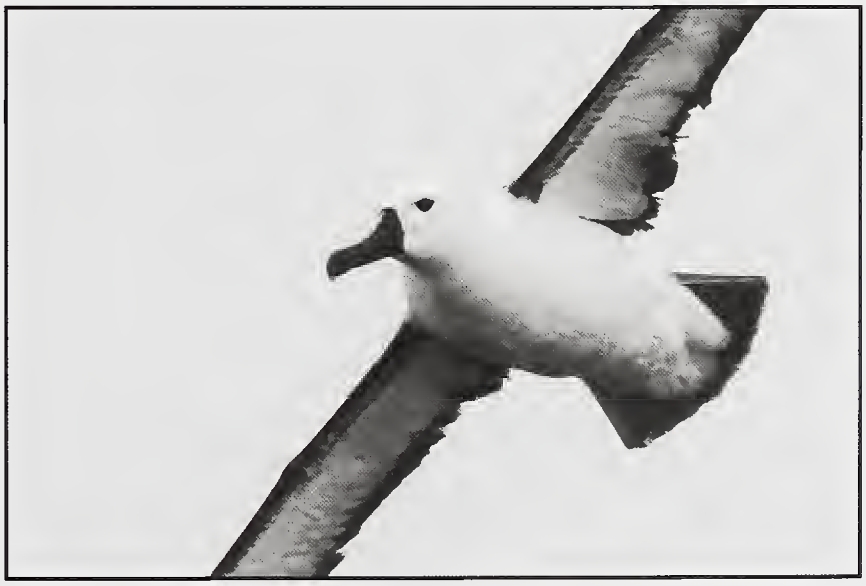
The talk moved on to the rarity of some of the species there. The Tristan wandering albatross (*Diomedea dabbenena*) now has only two pairs on the Tristan group after it was nearly hunted to extinction. Spectacled petrels (*Procellaria conspicillata*) are also present on Inaccessible Island with numbers having picked up since the imported pigs have died out. There was a lot of relief in the audience when Mike noted no rats or cats had been introduced to Inaccessible so there were large numbers of burrow and crevice nesting birds such as broad-billed prion (*Pachyptila vittata*), white-bellied storm petrel (*Fregetta grallaria*) and great shearwaters (*Puffinus gravis*). Mike did help count the burrows of the latter, which meant a lot of grovelling on the ground to ring adults and chicks. This bird will travel up to the North Atlantic from its breeding grounds on the Tristan group, as Mike said, to feed on Whale poo around Newfoundland. One other species mentioned was the Inaccessible Island rail (*Atlantisia rogersi*), the smallest flightless bird in the world. The team studied this rail and found its closest relative to be the dot-winged crake (*Porzana spiloptera*) in South America, with which it shared a common ancestor 1.5 million years ago. That ancestor will have flown to the island group and then lost its need to fly. Mike told us that this was not the only flightless organism on the Tristan group, as there are flightless moth and cranefly species on Gough.

Mike then described a significant discovery. While on Inaccessible, he started to observe the buntings. The upland birds seemed different from those on the lowland. There were already different species there - Wilkins bunting (*Nesospiza wilkinsi*) feeding on the *Phylica* trees and the Tristan bunting (*Nesospiza acunhae*), the species in which he noticed a difference. The birds in the upland type were brighter in colour. Mike went on to contact a friend, Peter Ryan who worked at Cape Town University and later came out to Inaccessible, finding different colour morphs at different altitudes. This led to a new subspecies of Tristan bunting (sp. *fraseri*) named after Mike. A lot of the research on this island was new, so Mike also had the chance to name a point on the island, Dirleton Point, after the village in East Lothian, close to where he grew up.

The island of Tristan da Cunha was then discussed in the presentation, especially its history. The Portuguese sea routes went past here to the East Indies, with Tristan first being noted in 1506. Since then, a British garrison was set up to ensure Napoleon did not escape St. Helena and this was the first permanent settlement. Families then started to come in, with some names still surviving on the island today - Glass, Swain, Green, Rogers, Hagan, Lavarello and Repeto. A famous visitor was Prince Alfred, Duke of Edinburgh, in 1887. At the time over 100 lived on Tristan da Cunha, growing from 18 people in 1821. The locals were starting to exploit seabirds at this time too which led to a reduction in number of many species. One other noteworthy piece of history Mike mentioned was in 1961 when a parasitic cone of the island's volcano erupted and led to locals sailing to Cape Town for safety, before being housed in England. They returned to the capital, Edinburgh of the Seven Seas, under two years later after a Royal Society Expedition had been to survey the impact of the eruption.

Mike finished the talk speaking about a nearby island, Gough Island which he went to in the 1990s. On the way, he visited Tristan again, with the presentation showing a photo of him on Tristanite rock, of which he had brought a piece to show those at the talk. On Gough, there are similar birds to the Tristan group, such as Gough flightless moorhen (*Gallinula comeri*) and Gough bunting (*Rowettia goughensis*). There are roughly 5 million pairs of seabirds, including the endemic Atlantic petrel (*Pterodroma incerta*). Mike mentioned problems for seabirds worldwide, including longline fishing and plastic pollution, but the main issue on Gough is mice. These rodents eat eggs, young and will even feast on adults, who are vulnerable when sitting on eggs. Many species are at a great risk of extinction. It was noted that wandering albatross (*Diomedea exulans*) are given 20 years to survive by certain scientists. However, Mike rounded off with the hope that work being done to eradicate the mice will allow these birds to survive. Preliminary trials are looking to drop poison from helicopters onto the island with RSPB leading the "Save the Albatross" project. The final slide showed a yellow-nosed albatross (*Thalassarche chlororhynchos*) photographed by Peter Ryan on another trip to Inaccessible Island. This bird had been ringed in the 1980s by Mike and will now be 40 plus years old, a very nice note to finish a very interesting talk.

Ptolemy McKinnon



yellow-nosed albatross

Final words

Forth Island Seabird Counts 2018

The year got off to a bad start when the Beast from the East gales hit the seabird colonies just as they were preparing for the breeding season. This meant that early nesters (e.g. shags) got washed out and had to rebuild their nests and re-lay. The breeding season started later than usual and subsequently the various species had mixed fortunes. Overall, attempted breeding results were as follows: fulmar down 17%; cormorant up 13%; shag down 12%; kittiwake down 23%; razorbill down 1%; guillemot down 18%; common tern down 91%; Arctic tern down 69%; sandwich tern – none breeding; greater black-backed gull up 2%; lesser black-backed gull up 16%; herring gull down 2%.

A full national seabird census has been on the cards for several years and it was finally arranged for 2018. As well as counting our own island colonies, some of us joined some SOC members on a boat to sail along the Berwickshire coast to count the seabird colonies on the cliffs there. This then raises the question: how do we count seabirds?

When you are looking at a seabird cliff the first thing is to split it up into manageable sections and there are usually natural features that can be used e.g. cracks, rocky outcrops, coloured staining, etc. Just working in one section, we count the species one at a time and agree the total before moving on to the next species. When that section of cliff has been completed we move on to the next section and repeat the process. The main aim should be to keep everything as simple as possible:

- when counting a cliff don't have more than two or three people trying to count the same species – the more people that are involved the harder it will be to resolve differences. If there are extra people then split the count up into teams to count separate areas or species
- keep the sections of cliff to be counted fairly small, possibly only a few nests – again the bigger the area the harder it will be to agree figures

Counting a cliff from the ground is relatively straightforward but attempting to count from a moving boat which is also getting rocked by tide and waves is far more challenging and is not recommended for a beginner!

The JNCC's Seabird Monitoring Handbook[1] details the recommended methods for performing a seabird survey and these vary by species. Obviously, when we visit an island there is the associated cost of hiring a boat to get there. To minimise these costs we need to time our visits carefully and there is a short period from the end of May until mid-June when all of the species are actively breeding. If poor weather causes delays then by the end of June, auks for example, are likely to have left the islands.

Most people incorrectly assume that we somehow manage to count "birds". Again the Handbook details what should be counted and for most species we count what might be loosely termed as "nests". Some species such as kittiwake, shag and cormorant do have proper nest structures while fulmar just have a shallow scrape in the ground (i.e. called a "site"). To be counted, the nest or site must show signs that it is "occupied" and is in use this year. This could be the presence of birds or eggs or very fresh nest material on a well-constructed nest. Guillemot provide the biggest headache as they bob about while they cluster tightly together on the cliff ledges and it is impossible to count (estimate?) anything other than the number of individual birds.

Puffin need to be treated separately. They nest in burrows and the recommended time to count them is in early May while they are still cleaning out their burrows. The whole puffin area is surveyed (i.e. counting all obvious holes) and there will be a number of sample plots which are counted separately. In these sample plots every hole will be checked to see if it is an active puffin burrow or not and we can then calculate a correction factor which is used to arrive at the number of apparently occupied burrows for the whole island.

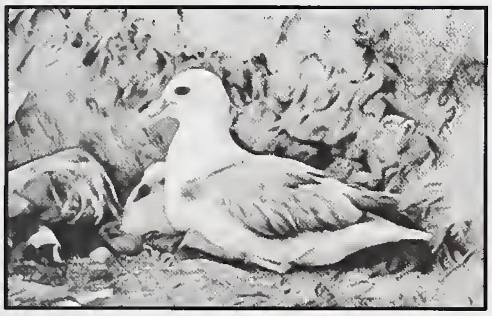
Disturbance is obviously a major consideration. When an incubating adult is flushed off its nest the eggs are exposed to predation by the ever watchful gulls. If we collapse a puffin burrow then that pair is unlikely to breed successfully this year. Cormorants are particularly vulnerable to disturbance and if disturbed at the wrong time they may completely desert their nests. Care must be taken too when there are chicks about as without their parents to guard them they are left vulnerable to gulls and there is the ever present danger that some may get frightened and fall over the cliff edge.

The gulls do have their own response to our intrusion into their world. They will fly up, circle and then dive steeply down screaming at us. Hopefully, if we are lucky, the worst we will get is a liberal coating of warm smelly "whitewash". If we are less lucky then we will get a hefty clout on the head and end up with blood clots sticking in our hair! Still it is us who are invading their territory so we cannot really complain!

With thanks to the Forth Seabird Group, Scottish Natural Heritage and RSPB for allowing the use of their data.

Bill Bruce

[1] Seabird monitoring Handbook for Britain and Ireland can be found online at jncc.defra.gov.uk/PDF/pub95_SeabirdHandbook.pdf



Fulmar nest

Shag nest

Razorbills

Guillemots on breeding ledge

Kittiwake nests

Checking puffin burrows

Summary of seabird counts on islands in the Firth of Forth

2018	Bass Rock	Craig leith	Lamb	Fidra	Inch keith	Carr Craig	Inch colm	Hay stacks	Inch Mickery & Cow & Calf	Inch Garvie Forth Bridge	Long Craig	May Isle	Total
Fulmar (AOS)	C20	123	13	152	272	1	180	0	38	226	0	283	1,308
Cormorant	0	54	52-56	0	114+	46	0	26	0	0	0	0	292
Shag (AON)	C19	155	41	170	155	16+	36	0	35	0	0	404	1,031
Gannet (AON)	X	0	0	0	0	0	0	0	0	0	0	0	X
Eider (AON)	3	X	X	X	X	0	C244	0	39+	32	X	1,183	1,501+
GBB Gull (AOT)	3 ind	31	6	5	C15	1-2	3	1	7	6	0	79	154
LBBG (AON)	1	97	1	131	X	5	X	5	235+	C41	0	1,684	2,200+
Herring Gull (AON)	74	1,092	87	1,177	X	24	X	18	210+	C255	0	3,398	6,335+
Kittiwake (AON)	C335	375	37	251	368	0	27	0	0	0	0	2,516	3,909
Common Tern (AON)	0	0	0	0	0	0	0	0	0	0	70	17	87
Arctic Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	261	261
Roseate Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	0	0
Sandwich Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill (AOS)	C176	186	76	161	134	0	9	0	1 bird on sea	0	0	3,738 (4,867 ind)	4,480
Guillemot (birds on cliffs)	C2620	C2360	C1940	491	148	0	0	0	0	0	0	18,795	26,264
Puffin (birds unless otherwise stated)	2 birds Flying	C2,640 AOB	685 AOB	C1,000 AOB	C1,600 AOB	0	32 birds on sea	0	58 birds on sea	0	0	X	5,925+ AOB

AOB/AON/AOS/AOT=Apparently occupied burrows/nests.sites.territories; X=birds present but not counted;0=none breeding; c=circa; mixed=two species (eg herring & LBB gulls) counted together; b=birds

Seventy Years On

Shortly after the end of the Second World War we moved into Chamberlain Road and I am still there. At that time, it was a quiet road with very little traffic. With the passage of time, the natural history of the area has been slowly changing.

After the war most houses, shops and churches needed repair and many gardens had been neglected. This was a considerable advantage to the wildlife which was more plentiful than it is now. Bats were everywhere and were roosting in the disused buildings along the canal and in the church spires. Once the canal buildings had been repaired, and netting installed on the church spires preventing entrance, the number of bats has steadily dropped and they are now seen only occasionally.

On many nights tawny owls (*Strix aluco*) were calling, and usually answered by calls from the grounds of the Astley Ainslie hospital. As the gardens were tidied up, there was less food for the owls, which are now only heard occasionally.

Starlings used to be present in large numbers, and some usually spent the night in my loft. This continued until the Forth Road Bridge was opened. Huge numbers migrated to the bridges where they soon became a nuisance.

Pied wagtail (*Motacilla alba yarrellii*) numbers have been falling for no obvious reason. I was told they had a very large, overnight roost in St. Andrews Square.

Gulls have been rather less popular. They lived in their hundreds on the church roofs at Holy Corner until two of the churches undertook major repairs to their roofs. The gulls had to go elsewhere, but only a modest number have returned.

We lost our house martins (*Delichon urbica*) about four years ago when the existing nests were removed. At about the same time we lost the annual return of the swifts (*Apus apus*) at the beginning of May. On a positive note we sometimes see waxwings (*Bombycilla garrulous*) in our gardens and one year I found over a hundred on a tree beside the canal.

A few houses have been divided into smaller units. As most now own cars, and on-street parking is now limited, front gardens have become car parks. Dogs have become fewer, but cats are more numerous. Grey squirrels were seldom seen in the early years but now they are everywhere.

Foxes (*Vulpes vulpes*) live successfully in towns and for about ten years they passed regularly through my garden each morning. They were furtive in their movements, except for one young vixen who became very tame and entered my house on several occasions! I think they had a den in the Greenhill / Churchhill area. Quite suddenly they disappeared. I presume someone objected to their presence and they were exterminated.

Elizabeth Farquharson

Going Astray!

On holiday at Strathpeffer in June, Mary Clarkson, Jean Murray and I set off to walk from Evanton to the spectacular Black Rock Gorge. Jean and I turned back part way but Mary carried on and presently realised she was on the wrong path. Cutting across by a narrow track she was delighted to come upon a patch of small cow-wheat (*Melampyrum sylvaticum*). This was reported to the BSBI recorder – and it turned out the local botanists had been trying to re-find it for some time, so that it could be recorded as still present in the 2020 Plant Atlas.

Jackie Muscott and Mary Clarkson

Appendix

Following is the list of organisms recorded by Members during our 2018 outdoor excursions:

Abies grandis	giant fir
Abies procera	noble fir
Acaena novae-zelandiae	piri-piri burr
Acanthosoma haemorrhoidale	hawthorn shieldbug
Accipiter nisus	sparrowhawk
Acer campestre	field maple
Acer ginnala	Amur maple
Acer platanoides	Norway maple
Acer pseudoplatanus	sycamore
Achillea millefolium	yarrow
Acrocephalus schoenobaenus	sedge warbler
Acronicta rumicis	knot grass moth
Actitis hypoleucos	common sandpiper
Adalia bipunctata	2-spot ladybird
Adalia decempunctata	10-spot ladybird
Adoxa moschatellina	moschatel
Aegithalos caudatus	long-tailed tit
Aegopodium podagraria	ground elder
Aesculus hippocastanum	horse chestnut
Aeshna juncea	common hawker
Aglais io	peacock butterfly
Aglais urticae	small tortoiseshell
Agrimonia eupatoria	agrimony
Agrimonia procera	fragrant agrimony
Alauda arvensis	skylark
Alcedo atthis	kingfisher
Alchemilla mollis	soft lady's-mantle
Alliaria petiolata	garlic mustard
Alnus glutinosa	alder
Alopecurus pratensis	meadow foxtail
Alopochen aegyptiaca	Egyptian goose
Amanita muscaria	fly agaric
Anagallis arvensis	scarlet pimpernel
Anallagma cyathigerum	common blue damselfly
Anas clypeata	shoveller
Anas crecca	teal
Anas penelope	wigeon
Anas platyrhynchos	mallard
Anas strepera	gadwall
Andrena haemorrhoa	orange-tailed mining bee
Andrena scotica	hawthorn bee
Anemone nemorosa	wood amemone
Angelica sylvestris	wild angelica
Anser anser	greylag geese
Anser brachyrhynchus	pink-footed goose
Anthocharis cardamines	orange tip butterfly
Anthophila fabriciana	nettle-tap moth
Anthophora plumipes	bee
Anthoxanthum odoratum	sweet vernal-grass
Anthriscus sylvestris	cow parsley
Anthus petrosus	rock pipit
Aphantopus hyperantus	ringlet
Aphidecta obliterata	larch ladybird
Apodemus sylvaticus	wood mouse
Apus apus	swift
Ardea cinerea	grey heron
Arenaria interpres	turnstone
Argynnis aglaja	dark green fritillary
Aricia artaxerxes	northern brown argus
Armeria maritima	thrift
Armillaria sp.	honey fungus
Artemisia vulgaris	mugwort
Arthurdendyus triangulatus	New Zealand flatworm
Asplenium scolopendrium	hart's tongue fern
Aster tripolium	sea aster
Athyrium filix-femina	lady fern
Atriplex littoralis	grass-leaved orache
Auricularia auricula-judae	jelly-ear fungus
Autographa gamma	silver-Y
Aythya farina	pochard
Aythya fuligula	tufted duck
Ballota nigra	black horehound
Barbarea vulgaris	winter cress
Baudoinia compniacensis	angels' share fungus
Betula pendula	silver birch
Betula sp.	birch
Bibio marci	St. Mark's fly
Bidens cernua	nodding bur-marigold
Bjerkandera adusta	fungus
Blechnum spicant	hard fern
Boloria selene	small pearl-bordered fritillary
Bombus hortorum	garden bumblebee
Bombus hypnorum	tree bumblebee
Bombus lapidarius	red-tailed bumblebee

Bombus lucorum	white-tailed bumblebee
Bombus monticola	blueberry bumblebee
Bombus pascuorum	common carder bumblebee
Bombus pratorum	early bumblebee
Bombus sylvestris	forest cuckoo bumblebee,
Bombus terrestris	buff-tailed bumblebee
Bombus vestalis	southern cuckoo bumblebee
Botrychium lunaria	moonwort
Brachypodoium sylvaticum	false brome
Branta leucopsis	barnacle goose
Branta canadensis	Canada goose
Brassica napus	oil-seed rape
Bryum rubens	moss
Buccinium undatum	common whelk
Buddleja davidii	buddleia
Bulgaria iniquinans	bachelor's buttons
Buteo buteo	buzzard
Caikile maritima	sea rocket
Cairina moschata	Muscovy duck
Calidris alba	sanderling
Calidris alpina	dunlin
Calidris canutus	knot
Calluna vulgaris	heather
Caltha palustris	marsh marigold
Calvia quatuordecimguttata	ladybird, cream-spot
Campaea margaritata	light emerald moth
Cantharellus cibarius	chanterelle
Cantharis sp.	soldier beetle
Capreolus capreolus	roe deer
Capsella bursa-pastoris	shepherd's purse
Carabidae sp.	ground beetle
Carabus violaceus	violet ground beetle
Cardamine raphanifolia	greater cuckoo-flower
Linaria cannabina	linnet
Carduelis carduelis	goldfinch
Carduelis spinus	siskin
Carduelis flammea	redpoll
Carex distans	distant sedge
Carex flacca	glaucous sedge
Carex pendula	pendulous sedge
Carex vesicaria	bladder sedge
Cassida sp.	tortoise beetle
Cedrus deodara	deodar
Centranthus ruber	red valerian
Cepaea hortensis	white-lipped snail
Cerapteryx graminis	antler moth
Certhia familiaris	treecreeper
Cetraria islandica	Iceland moss
Chamaecyparis lawsoniana	Lawson's cypress
Chamerion angustifolium	rosebay willowherb
Charadrius hiaticula	ringed plover
Cheilosia illustrate	hoverfly
Chiasmia clathrata	latticed heath
Chlorociboria aeruginascens	green elfcap
Chorthippus brunneus	field grasshopper
Chorthippus parallelus	meadow grasshopper
Chroicephalus fuscus	lesser black-backed gull
Chroicocephalus ridibundus	black-headed gull
Chrysomelidae	flea beetles
Chysosplenium oppositifolium	opposite-leaved golden saxifrage
Cicadella viridis	green leafhopper
Cinclus cinclus	dipper
Cionus scrophulariae	figwort weevil
Circaea lutetiana	enchanter's nightshade
Cirsium heterophyllum	melancholy thistle
Cladonia ciliate	lichen
Clangulla hyemallis	long-tailed duck
Claytonia sibirica	pink purslane
Clitocybe fragrans	fragrant funnel
Clitocybe nebularis	clouded agaric
Coccinella septempunctata	ladybird, 7-spot
Coccinella undecimpunctata	ladybird, 11-spot
Coenonympha pamphilus	small heath
Colletes succinctus	solitary bee
Rhodocollibia butyracea	buttercap fungus
Colocasia coryli	nut tree tussock moth
Columba oenas	stock dove
Columba palumbus	wood pigeon
Columbia livia	feral pigeon
Coprinellus micaceus	glistening ink cap
Coprinus comatus	shaggy ink cap
Corvus corax	raven
Corvus corone	carrion crow
Corvus frugilegus	rook
Corvus monedula	jackdaw
Corylus avellana	hazel
Corylus calurna	Turkish hazel
Cosmia trapezima	dun-bar moth
Crataegus monogyna	hawthorn
Cruciata laevipes	crosswort
Cupido minimus	small blue butterfly
Cyanistes caeruleus	blue tit
Cygnus cygnus	whooper swan
Cygnus olor	mute swan

Cynomya mortuorum	blowfly
Cytisus scoparius	broom
Dactylis glomerata	cock's foot
Dactylorhiza fuchsii	common spotted orchid
Dactylorhiza maculata	heath spotted orchid
Dama dama	fallow deer
Delichon urbica	house martin
Dendrocopos major	great spotted woodpecker
Dicranum scoparium	moss
Didymodon tophaceus	olive beard-moss
Diplolepis rosae	Robin's pincushion
Dipsacus fullonum	teasel
Dolycoris baccarum	hairy shieldbug
Doronicum pardalianches	leopard's-bane
Doronicum plantagineum	plantain-leafed leopard's bane
Drapetisca socialis	spider
Dryopteris affinis agg.	scaly male fern
Dryopteris dilatata	broad-buckler fern
Dryopteris filix-mas	common male fern
Echinoidea	sea urchins
Egretta garzetta	little egret
Elasmucha grisea	parent shieldbug
Eleocharis palustris	common spike-rush
Emberiza citronella	yellowhammer
Emberiza schoeniclus	reed bunting
Ensis sp.	razor clams
Epilobium hirsuitum	great hairy willowherb
Epilobium montanum	broad-leaved willowherb
Epiphanus cornutus	false click beetle
Episyrphus balteatus	marmalade hoverfly
Equisetum fluviatile	water horsetail
Equisetum palustre	marsh horsetail
Equisetum sp.	horsetail
Erica tertralix	cross-leaved heath
Erica vagans	Cornish heath
Erigeron acer	blue fleabane
Eriophyes tiliae	lime nail gall
Eriophyes tiliae	mite
Eristalis tenax	hoverfly
Erithacus rubecula	robin
Euchoeca nebulata	dingy shell moth
Euonymus alatus	winged spindle tree
Euphrasia nemorosa	common eyebright
Euphrasia sp.	eyebright
Euspira catena	necklace shell

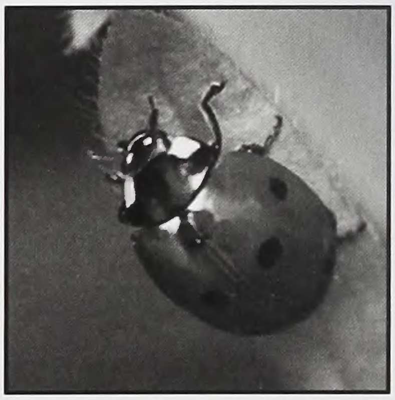
Fagus sylvatica cv. 'asplenifolium'	fern-leaved beech
Fagus sylvatica	beech
Falco tinnunculus	kestrel
Festuca rubra	red fescue
Ficaria verna	lesser celandine
Filipendula ulmaria	meadowsweet
Fissidens bryoides	moss
Fissidens viridulus	moss
Flammulina velutipes	velvet shank
Fratercula arctica	puffin
Fraxinus excelsior	ash
Fringilla coelebs	chaffinch
Fringilla montifringilla	brambling
Fulica atra	coot
Fulmarus glacialis	fulmar
Fumaria muralis	common ramping-fumitory
Galanthus nivalis	snowdrop
Galium odoratum	woodruff
Galium saxatile	heath bedstraw
Galium verum	lady's bedstraw
Gallinago gallinago	snipe
Gallinula chloropus	moorhen
Garrulus glandarius	jay
Gaultheria shallon	shallon
Gavia immer	great northern diver
Gavia stellata	red-throated diver
Gentiana campestris	field gentian
Geranium dissectum	cut-leaved crane's -bill
Geranium molle	dove's foot crane's-bill
Geranium pyrenaicum	hedgerow crane's-bill
Geranium robertianum	herb Robert
Geranium sylvaticum	wood crane's-bill
Geum x hybridum	hybrid avens
Geum rivale	water avens
Geum urbanum	wood avens
Glechoma hederacea	ground ivy
Glyceria fluitans	floating sweet-grass
Glyceria maxima	reed sweet-grass
Grypocoris stysi	bog hoverfly
Gyalecta ulmi	lichen on elms
Gymnocarpium dryopteris	oak fern
Gymnopilus penetrans	common rustgill
Gymnopus/Marasmius androsaceus	horsehair parachute fungus
Haematopus ostralegus	oystercatcher
Halichoerus grypus	grey seal
Halyzia 16-guttata	orange ladybird
Helianthemum nummularium	rockrose

Helvella lacunosa	elfin saddle fungus
Heracleum sphondylium	hogweed
Heterogaster sp.	nettle bug
Hippodamia variegata	ladybird, Adonis's
Hippophae rhamnoides	sea buckthorn
Hippurus vulgaris	common mare's tail
Hirundo rustica	swallow
Hordeum jubatum	foxtail barley
Hyancinthoides non-scripta	bluebell
Hypholoma fasciculare	sulphur tuft fungus
Hypoxylon fragiforme	beech woodwart
Iassus lanio	leafhopper
Ilex aquifolium	common holly
Ilex sp.	holly
Impatiens glandulifera	Himalayan balsam
Inocybe geophylla	earthy inocybe fungus
Iris foetidissima	stinking iris
Ischnoderma benzoinum	fungus
Jaapiella veronicae	gall on germander speedwell
Juncus acutiflorus	sharp-flowered rush
Juncus articulatus	jointed rush
Juncus bufonius	toad rush
Juncus conglomeratus	compact rush
Kindbergia praelonga	common feather-moss
Kleidocerys resedae	birch catkin bug
Koeleria macrantha	crested hair-grass
Kretzschmaria deusta	brittle cinder fungus
Kuehneromyces mutabilis	sheathed woodtuft
Lacanobia thalassina	pale shouldered brocade
Laccaria amethystine	amethyst deceiver fungus
Laetiporus sulphurous	chicken in the woods
Lagopus lagopus	red grouse
Lamiastrum galeobdolon var argentatum	yellow archangel
Lamium album	white dead-nettle
Lamium amplexicaule	henbit dead-nettle
Lamium confertum	northern dead-nettle
Lamium hybridum	cut-leaved dead-nettle
Laothoe populi	poplar hawk-moth
Lapsana communis	nipplewort
Larix decidua	European larch
Larus argenatus	herring gull
Larus canus	common gull
Larus marinus	greater black-backed gull
Lasiommata megera	wall brown butterfly
Lassioglossum sp	solitary bee
Lathyrus pratensis	meadow vetchling
Luzula pilosa	hairy woodrush
Leccinum holopus	white birch bolete
Lefrozia ventricita	tumid notchwort
Lepidium draba	hoary cress
Lepista saeva	field blewit
Leptopterna dolabrata	meadow plant bug
Leptura quadrifasciata	four banded longhorn beetle
Lepus europaeus	brown hare
Leucanthemum vulgare	oxeye daisy
Leymus arenarius	lyme grass
Libellula quadrimaculata	four-spotted chaser
Ligusticum scoticum	Scot's lovage
Ligustrum sp.	privet
Limosa lapponica	bar-tailed godwit
Limosa limosa	black-tailed godwit
Linaria cannabina	common linnet
Lolium multiflorum	Italian ryegrass
Lonicera xylosteum	fly honeysuckle
Lophocolea bidentata	liverwort
Lophocolea semiteres	liverwort
Lotus corniculatus	bird's-foot-trefoil
Loxia curvirostra	crossbill
Luzula campestris	field woodrush
Luzula sylvatica	great woodrush
Lycaena phlaeas	small copper
Lycoperdon perlatum	common puffball
Lythrum salicaria	purple loosestrife
Macroglossum stellatarum	humming-bird hawk-moth
Malva neglecta	dwarf mallow
Malva sylvestris	common mallow
Maniola jurtina	meadow brown
Marasmius rotula	fungus
Matteucia struthiopteris	ostrich fern
Matricaria discoidea	pineapple weed
Melampyrum pratense	common cow-wheat
Meles meles	badger
Mellanitta fusca	velvet scoter
Mellanitta nigra	common scoter
Mercurialis perennis	dog's mercury
Mergus merganser	goosander
Mergus serrator	red-breasted merganser
Mesembrina meridian	noon fly
Metallina sp.	spider
Milium effusum	wood millet
Mimulus guttatus	monkey flower
Mimulus sp.	monkeyflower
Moehringia trinevia	three-veined sandwort

Morus bassanus	gannet
Motacilla alba yarrellii	pied wagtail
Motacilla cinerea	grey wagtail
Mya truncata	blunt gaper
Mycena pura	lilac bonnet
Myosotis sp.	forget-me-not
Myosotis scorpioides	water forget-me-not
Myrrhis odorata	sweet cicely
Myzia oblongoguttata	striped ladybird
Nasturtium officinale	watercress
Nicrophorus sp.	burying beetle
Nomada fabriciana	nomad bee
Nothofagus obliqua	roble beech
Notostira elongata	elongate grass bug
Numenius arquata	curlew
Nuphar lutea	yellow water-lily
Nymphaea alba	white water-lily
Ochlodes sylvanus	large skipper
Odontopera bidentata	scalloped hazel moth
Oenothera sp.	evening primrose
Oligia fasciuncula	middle-barred minor
Ommatoiulus sabulosus	striped millipede
Ophiuroidea	brittle stars
Oreopteris limbosperma	lemon-scented fern
Origanum vulgare	wild marjoram
Ornithogalum umbellatum	star-of-Bethlehem
Oryctolagus cuniculus	rabbit
Osmia bicornis	red mason-bee
Oudemansiella mucida	porcelain fungus
Ouelma melanopus	cereal leaf beetle
Oxalis acetosella	wood sorrel
Pachytodes cerambyciformis	longhorn beetle
Palustriella commutate	curled hookmoss
Pararge aegeria	speckled wood
Periparus ater	coal tit
Parus major	great tit
Passer domesticus	house sparrow
Passer montanus	tree sparrow
Paxillus involutus	brown roll-rim fungus
Pectinidae	scallops
Peltigera membranacea	common dog lichen
Pentaglottis sempervirens	green alkanet
Pentatoma rufipes	red-legged shieldbug
Perlodes mortonii	orange-striped stonefly
Petasites alba	white butterbur
Petasites hybridus	butterbur
Petrophora chlorosata	brown silver-line moth
Phalacrocorax carbo	cormorant
Phalangium opilio	harvestman spider
Phalaris arundinacea	reed canary grass
Phegopteris connectilis	beech fern
Phleum pratense	timothy grass
Phlogophora meticulosa	angle shades moth
Phoenicurus phoenicurus	common redstart
Phylloscopus collybita	chiffchaff
Phylloscopus sp.	warbler
Phylloscopus trochilus	willow warbler
Pica pica	magpie
Picea sitchensis	sitka spruce
Picris hieracloides	hawkweed ox-tongue
Picromerus bidens	spiked shield-bug
Picus viridis	green woodpecker
Pieris brassicae	large white
Pieris napi	green-veined white
Pieris rapae	small white
Piezodorus lituratus	gorse shieldbug
Pilosella aurantiaca	fox and cubs
Pinus peuce	Macedonian pine
Pinus pinea	stone pine
Pinus sylvestris	Scots pine
Plagodis dolobraria	scorched wing moth
Plantago lanceolata	ribwort plantain
Plecoptera sp	stonefly
Pluvialis apricaria	golden plover
Pluvialis squatarola	grey plover
Poa sp.	meadow grass
Podiceps cristatus	great crested grebe
Polydesmus angustus	flat-backed millipede
Polygonia c-album	comma
Polypodium vulgare	common polypody
Polyporus squamosus	dryad's saddle fungus
Polystichum aculeatum	hard shield fern
Polystichum setiferum	soft shield fern
Populus tremula	aspen
Potentilla anserina	silverweed
Potentilla erecta	tormentil
Potentilla sterilis	barren strawberry
Primula vulgaris	primrose
Propylea 14-punctata	ladybird, 14-spot
Prunella modularis	dunnock
Prunus avium	wild cherry
Prunus laurocerasus	cherry laurel
Prunus padus	bird cherry
Prunus spinosa	blackthorn
Psathyrella sp.	fungus
Pseudofumaria claviculata	climbing corydalis

Pseudoips prasinana	green silver-lines moth
Pseudotsuga menziesii	Douglas fir
Pteridium aquilinum	bracken
Ptichaptum abietinum	ciliated fringewort
Pyrola minor	common wintergreen
Pyrrhosoma nymphula	large red damselfly
Pyrrhula pyrrhula	bullfinch
Quercus cerris	Turkey oak
Quercus robur	pedunculate oak
Quercus sp.	oak
Rallus aquaticus	water rail
Rana temporaria	common frog
Ranunculus auricomus	goldilocks buttercup
Ranunculus aquatilis agg.	water crowfoot
Ranunculus hederaceus	ivy-leaved crowfoot
Ranunculus lingua	greater spearwort
Ranunculus repens	creeping buttercup
Ranunculus sceleratus	celery-leaved buttercup
Ranunculus sp.	buttercups
Regulas regulas	goldcrest
Rhagio tringarius	marsh snipefly
Rhinanthus minor	yellow rattle
Rhodobryum roseum	moss
Rhododendron arboreum	tree rhododendron
Rhytidiadelphus squarrosus	moss
Riccardia palmata	palmate germanderwort
Riparia riparia	sand martin
Rosa rugosa	Japanese rose
Rubus fruticosus	bramble
Rumex obtusifolius	broad-leaved dock
Rumex sanguineus	wood dock
Ruscus aculeatus	butcher's broom
Russula fellea	geranium-scented russula
Russula nobilis	beechwood sickener
Russula ochroleuca	ochre brittlegill fungus
Salix fragilis	crack willow
Salix sp.	willow
Salticus scenicus	zebra spider
Sambucus nigra	elder
Saxifraga granulata	meadow saxifrage
Scapania nemorea	liverwort
Schoenoplectus lacustris agg.	club-rush
Schoenus nigricans	bog-rush
Sciurus vulgaris	red squirrel
scotopteryx chenopodiata	shaded broad-bar
Scrophularia nodosa	figwort
Selenia dentaria	early thorn moth
Selenia lunularia	lunar thorn moth
Senecio inaequidens	narrow-leaved ragwort
Sequoia sequoiodendron	wellingtonia
Sericomyia silentis	bog hoverfly
Silene dioica	red campion
Silene latifolia	white campion
Sisymbrium officinale	hedge mustard
Sitta europaea	nuthatch
Skimmea japonica	Japanese skimmia
Solidago virgaurea	goldenrod
Somateria mollissima	eider duck
Sorbus aucuparia	rowan
Sphaeroderma testaceum	jumping beetle
Spilosoma lubricepida	white ermine moth
Stachys arvensis	field woundwort
Stachys silvatica	hedge woundwort
Stellaria greminea	lesser stitchwort
Stellaria holostea	greater stitchwort
Stellaria media	chickweed
Stellaria nemorum	wood stitchwort
Sterna sandvicensis	Sandwich tern
Strix aluco	tawny owl
Strophosoma melanogrammum	nut leaf weevil
Sturnus vulgaris	starling
Suaeda maritima	sea blite
Succisa pratensis	devil's bit scabious
Sylvia atricapilla	blackcap
Sylvia borin	garden warbler
Sylvia communis	whitethroat
Sympetrum striolatum	common darter
Symphytum tuberosum	tuberous comfrey
Symphytum x uplandicum	Russian comfrey
Tachina grossa	fly
Tachybaptus ruficollis	little grebe
Tachypodoiulus niger	white-legged snake millipede
Tadorna tadorna	shelduck
Tanacetum vulgare	tansy
Taphrina pruni	pocket plum gall
Taxodium distichum	swamp cypress
Taxus baccata	yew
Tellima grandiflora	fringe cups
Tenthredo sp.	sawfly
Tetrix undulata	common groundhopper
Thuja occidentalis	white cedar
Thymelicus sylvestris	small skipper

Tilia x europea	common lime
Timarcha tenebricosa	ruddy nosed beetle
Tolmeia menziesii	piggyback plant
Torilis japonica	upright hedge parsley
Trametes ochracea	fungus
Trametes versicolor	turkeytail fungus
Trichaptum abietinum	purplepore bracket fungus
Tricholoma sciodes	beech knight
Trichoptera sp.	caddis fly
Trifolium dubium	lesser trefoil
Tringa glareola	wood sandpiper
Tringa nebularia	greenshank
Tringa ochropus	green sandpiper
Tringa tetanus	redshank
Tripleurospermum sp	mayweed
Troglodytes troglodytes	wren
Tsuga heterophylla	western hemlock
Tunicate	sea squirts
Turdus iliacus	redwing
Turdus merula	blackbird
Turdus philomelos	song thrush
Turdus pilaris	fieldfare
Turdus viscivorus	mistle thrush
Tussilago farfara	colt's-foot
Typha angustifolia	lesser bulrush
Typha latifolia	bulrush
Udea lutealis	pale straw pearl
Ulex europaeus	gorse
Ulmus sp.	elm
Uria aalge	guillemots
Urtica dioica	stinging nettle
Vaccinium myrtillus	blaeberry
Valeriana officinalis	valerian
Valeriana pyrenaica	Pyrenean valerian
Vanellus vanellus	lapwing
Vanessa atalanta	red admiral
Vanessa cardui	painted lady
Veronica chamaedrys	germander speedwell
Veronica hederifolia	ivy-leaved speedwell
Veronica persica	common field speedwell
Veronica serpyllifolia	thyme-leaved speedwell
Viburnum opulus	guelder rose
Vicia cracca	tufted vetch
Vicia hirsuta	hairy tare
Vicia sylvatica	wood vetch
Vicia sativa	common vetch
Viola odorata	sweet violet
Viola riviniana	common dog violet
Volucella pellucens	hoverfly
Vulpes vulpes	red fox
Xanthorhoe montanata	silver-ground carpet
Xylaria hypoxylon	candlesnuff fungus
Xylaria polymorpha	dead man's fingers
Yponomeuta evonymella	bird-cherry ermine moth
Zicrona caerulea	blue shieldbug
Zootoca vivipara	common lizard



Which organism was most often recorded during NATS excursions in 2018?

It's the **7-spot ladybird**, recorded on nine excursions, with **goldfinch** and **swallow** recorded on eight each

Selm Muir

Tyninghame

Newhall

Elie